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THE AMERICAN PSYCHOLOGIST

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A NEW EDUCATION AND TRAINING STRUCTURE FOR THE APA

APA EDUCATION AND TRAINING BOARD¹

AT its September meeting in Chicago, the Council of Representatives took steps to broaden both the scope and the effectiveness of the Association's efforts to deal with problems of education and training in American psychology. Following a recommendation by the Board of Directors based on a careful study, the Council replaced its hitherto uncoordinated committees on educational policies and training standards with an Education and Training Board. Committees of the new Board will assume all the responsibilities of the committees being discontinued—as well as many new responsibilities—and the new committees will work as part of a coordinated whole. This fact is expected to minimize the danger of a piecemeal approach to what we have come to realize are inherently interrelated educational issues. The need to achieve such an integrated approach to the problems of psychological training had been the subject of a recommendation to the Association from the Policy and Planning Board.

The new structure created by the Council of Representatives is composed of five committees and a ten-man coordinating body, the latter being made up of the five committee chairmen plus five members-at-large. The committees are as follows: (1) Committee on Undergraduate Education; (2) Committee on Subdoctoral Education; (3) Committee on Doctoral Education; (4) Committee on Practicum Training; and (5) Committee on Psychology in Other Professional Schools. The Board has the full-time services of an executive officer. This has been made possible in part by a \$15,000 grant to the Association from the U. S. Public Health Service.

The area of responsibility of each of the new committees has been defined broadly by the Council. However, the Board and the committees themselves have been charged with the task of mapping in greater detail the directions of their future work. Anticipating that these more detailed committee

plans will require the creation of subcommittees and specialized panels for their execution, the Council has provided authorization for expansion of the Board as needed. (New personnel, of course, will be elected through established Council procedures.) Under the former system of independent committees reporting directly to the Board of Directors, establishing a new group of committees dealing with educational matters would have been a cause for concern about multiplying existing confusion. The wisdom of the new structure becomes evident when we realize that new committees will now be created only in response to the requirements of a coordinated plan and that the results of their work will reach the Board of Directors as part of an integrated report from the Education and Training Board.

UNDERGRADUATE EDUCATION

Undergraduate psychology courses are now offered to many kinds of students, under almost every conceivable institutional arrangement, by faculty members who possess all degrees of competence, interest in teaching psychology, and interest in education as such. The Committee on Undergraduate Education has therefore been given general responsibility, not only for problems of curriculum and method, but also for allied educational problems in which psychologists are involved.

A few problems stand out as particularly important within the array of questions with which this committee might attempt to deal. For example, just what do we conceive to be the educational functions of our undergraduate offerings; that is, what are our objectives in offering a psychology major or offering service courses to non-majors, or when participating in interdisciplinary or general, educational activities? Two aspects of this question are so significant that they stand out at once. First, to what extent should undergraduate education in psychology be thought of as being in the liberal arts tradition, rather than vocationally or pre-professionally oriented? Even more precisely: Should undergraduate programs be shaped by

¹ This article was prepared by Stuart W. Cook, chairman, and Victor C. Raimy, executive officer, of the Education and Training Board.

graduate requirements? Second, is there a genuine difference between education said to be in the interests of student needs, and education said to be in the interests of mastery of subject matter?

In addition to being concerned with what might be called our philosophy of education, the Committee on Undergraduate Education might also be concerned with how best to attain the chosen educational objectives of psychology offerings. Involved here are questions concerning the planning of a curriculum, the choice of teaching methods, and considerations of faculty selection and training. In addition, it may be noted that the encouragement of research on teaching and on curriculum problems may have significant bearing on progress in these matters.

To such questions there is, of course, no single answer, and perhaps no permanently valid answer. Even to consider them, however, implies the need for facts about what is now taking place, and the data in many cases will consist of the judgments of teachers. It will therefore be necessary for the Committee on Undergraduate Education, as well as the other committees of the Education and Training Board, to call upon the members of the Association for information and opinion.

SUBDOCTORAL EDUCATION

The Committee on Subdoctoral Education will be concerned with what has become one of the major issues in the education of psychologists. What kinds and levels of training should we plan for? Over the past five years, a number of committees, both APA and divisional, have studied the many problems of subdoctoral education, and several have engaged in extensive fact finding. There seems to be general recognition of the need for persons who are trained at subdoctoral levels, but no clear-cut agreement as to their appropriate job functions or the type of training they need.

This committee will face questions such as the following: Should graduate programs be organized for educating to the MA degree level without regard for specialization? Is there a common core of psychological content and method which should be included in all subdoctoral programs? Should further specialization be considered, so that subdoctoral programs could be planned in terms of more narrow job specialties based upon the results of job analyses?

Questions of a somewhat different nature can be added. Should the MA degree continue to be awarded, as is occasionally now the case, to students who attempt but fail to obtain the doctoral degree? Should certificates of proficiency be given in place of degrees at the subdoctoral level? Can training for technician-type work be achieved by combining one year of graduate work with a well-organized undergraduate major in order to circumvent otherwise lengthy preparation for jobs which have only mediocre salary possibilities?

Questions relating to the MA degree as a preliminary step to the PhD must also be considered. Should the MA degree be retained as preparation for a more advanced degree? If so, what should be the content of programs leading to such a degree? Can PhD-granting universities offer better doctoral programs if other institutions assume the burden of providing training to the MA level? If so, how can the two types of institutions best organize their programs in order to integrate the student's program and prevent excessive lengthening of graduate education when transfers from one school to another take place?

DOCTORAL EDUCATION

As the legatee of the former Committee on Training in Clinical Psychology, the Committee on Doctoral Education is to continue the evaluation of training in clinical psychology following procedures outlined in the *American Psychologist* of November, 1951. Its members will make evaluation visits to universities requesting them, and will make routine visits, probably at five-year intervals, to universities already evaluated.

In addition, the committee will examine the major issues in doctoral education in psychology in general and in the various special fields other than clinical. Among these issues is the question as to whether it is possible to devise a common core of subject matter for all doctoral programs, or whether each area such as clinical, industrial, social, experimental, etc., should have curricula which are largely different from one another.

Another issue has to do with doctoral research for students in the applied areas. To what extent does such research involve different problems and serve different training functions than is true for dissertation research on more familiar laboratory problems? Can guiding principles be found which will help to clarify the differences of opinion which

arise regarding the criteria for acceptable doctoral research in the applied areas?

The committee will also give special attention to doctoral training in such areas as social and industrial psychology, where the demand for well-trained psychologists exceeds the supply and where it appears the need will grow in the future. While no evaluation programs in these areas are now being considered, it is hoped that the committee will eventually develop a visiting advisory service for the assistance of such training institutions as are interested.

PRACTICUM TRAINING

Evaluation of practicum agencies in clinical psychology was considered for several years by the Committee on Training in Clinical Psychology. During the present year, the Committee on Practicum Training will limit itself largely to the assessment of seventeen practicum training agencies in the clinical area. The year's experience should serve as a pretest of evaluation procedures. Selection of the agencies to be visited was based upon consideration of time and expense as well as upon the desire to study a representative sample. The results of these exploratory evaluations will be communicated to both the agencies and the interested universities but will not be published.

Outside the field of psychology, programs which include field experience have been under way for some time. These may be found at both undergraduate and graduate levels and in professional schools. Although the need for practicum training in psychology has been most apparent in the clinical field, such training is gradually making its appearance in social psychology, school psychology, industrial psychology, and counseling and guidance. Is it desirable to extend field training in psychology to areas in which it is not now used? In the long run, the Committee on Practicum Training will be concerned with this general problem of how best to integrate the classroom work of the university with field training opportunities both inside and outside university walls.

THE TEACHING OF PSYCHOLOGY IN OTHER PROFESSIONAL SCHOOLS

Courses in psychology are being taught with increasing frequency outside of psychology departments. Very little is known about either the content or the number of such courses—except that

their variety is great. Courses are known to be offered to the following professions: nursing, engineering, medicine including psychiatry, education, business, home economics, theology, and social work.

The fact that psychologists are being called upon to teach in other professional schools raises significant questions. Should psychologists attempt to strengthen the trend already under way? Are there other professional fields to which we can contribute constructively? Can the APA be of assistance to those responsible for the quality and usefulness of courses being offered? Have we perhaps been neglecting certain areas of psychology which might well be developed in long-range planning in order to meet the needs of related fields?

During the current year, the work of the Committee on Psychology in Other Professional Schools will consist largely of gathering information about the character of courses now being offered, and about the problems of interprofessional relationships encountered. In view of the difficulties involved in gathering this material, the committee would appreciate help from anyone knowing of courses in progress. Such information should be sent to the Chairman, Dr. Ruth S. Tolman, 345 S. Michigan Avenue, Pasadena 5, California.

PERSONNEL OF THE BOARD AND ITS COMMITTEES

The Committee on Undergraduate Education has the following members: Claude E. Buxton, chairman, Wilbert J. McKeachie, Robert J. McLeod, Eleanor O. Miller, and Robert H. Knapp.

The members of the Committee on Subdoctoral Education are: David C. McClelland, chairman, Ralph F. Berdie, Lawrence E. Cole, Elizabeth Duffy, Fred McKinney, Milton A. Saffir, and George S. Spear.

Members of the Committee on Doctoral Education are: Bruce V. Moore, chairman, Donald K. Adams, Arthur L. Benton, Richard S. Crutchfield, Edward S. Bordin, Robert E. Harris, Edwin R. Henry, Saul Rosenzweig, Harold Schlosberg, Neil D. Warren, Delos D. Wickens, and C. Gilbert Wrenn.

The Committee on Practicum Training is as follows: Karl F. Heiser, chairman, Roy Brener, George E. Gardner, Isabelle V. Kendig, and Donald E. Super.

Members of the Committee on Psychology in Other Professional Schools are: Ruth S. Tolman,

chairman, Roger M. Bellows, Mary Ford, Ivan N. Mensh, George A. Miller, Helen Nahm, Rutherford B. Porter, and E. Llewellyn Queener.

The Board itself is composed of the Chairmen of these committees together with the following members-at-large: Stuart W. Cook, chairman, E. Lowell Kelly, Lyle H. Lanier, Donald B. Lindsley, Clifford T. Morgan.

The executive officer of the Board is Victor C. Raimy.

COMMITTEE CHANGES RESULTING FROM CREATION OF THE EDUCATION AND TRAINING BOARD

As was pointed out earlier, certain changes in committee structure were brought about by creation of the new board. These changes are as follows: (1) The Committee on Training in Clinical Psychology has been discontinued and its responsibilities assigned in part to the Committee on Doctoral Education and in part to the Committee on Practicum Training. (2) The Committee on Training in Psychology Below the Doctoral Level has been discontinued; its responsibilities have been assigned to the new Committee on Subdoctoral Education. (3) The functions of the third committee to be discontinued, namely, the Committee on Standards of Training Psychologists, will be assumed in part by each of the Board's committees. Each committee, of course, will be concerned with standards in the training area for which it is responsible. (4) The Committee on Intraprofessional Relationships in Psychology, to be discontinued, dealt with problems which are to be handled in the future in part through the Board's Committees on Doctoral and Subdoctoral Education and in part as an aspect of its coordinating and integrative activities. (5) The Committee on Departments Offering Doctoral Training, while discontinued as an APA committee, has been reconstituted as the Conference of Departments Offering Doctoral Training in Psychology. The Committee on Doctoral Education will seek the assistance of the Conference on many of the problems it faces.

SOME GENERAL CONSIDERATIONS

A casual consideration of the current status of American psychology will suffice to make it clear that our educational programs are in a state of flux. As others have pointed out, this is a result of the rapid growth of psychology as a science and of its sudden expansion as a many-sided profession.

Until very recently, the education of the doctoral candidate in psychology consisted of an apprentice-like period of study and research, largely with one eminent professor. The transition from an educational program of such simplicity to the training programs with which we currently struggle has been so rapid and unplanned that the emergence of basic educational issues was inevitable. No single approach to these issues will suffice. Some of them may be most effectively attacked by encouraging more extensive experimentation with educational procedures. The solution to others may be found in disseminating widely those procedures which for the time being appear to be the most successful.

In studying these issues on behalf of the Association, the Education and Training Board is acutely aware of its need for help from other psychologists. As already indicated, such help will consist in part of information which can only be provided by those who participate in educational programs. In addition, however, it will be necessary to secure opinion and judgment on various matters. We hope to arrange for the latter through discussions between committee and Board members and their colleagues throughout the country. One occasion for such discussions will be the visits to be made to universities and practicum training agencies by committee members; another will be local, state, and regional meetings. However, independently of such group discussions, all APA members are urged to send comments and suggestions to the Board through its chairman. Suggestions bearing upon the Board's over-all orientation and the issues to which it should give priority would be particularly helpful at this time.

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THE INTERNSHIP IN CLINICAL PSYCHOLOGY: THREE ALTERNATIVE PLANS

AUSTIN FOSTER, ARTHUR L. BENTON, AND A. I. RABIN

In collaboration with

APA Committee on Training in Clinical Psychology

IN its first report (1), the Committee on Training in Clinical Psychology recommended a period of field training, i.e., the so-called internship, as an integral part of graduate education in clinical psychology. The place and purpose of the internship have been further discussed in the report of the Boulder Conference (2) and again by CTCP in its recent statement on "Standards for practicum training in clinical psychology" (3). In these discussions there has been agreement upon the desirability of this type of experience; and there has also been a general consensus, reflected by common practice, that the internship should occupy the third or, possibly, fourth full year of the student's graduate career.

Satisfaction with this arrangement has not, however, been universal, and thoughtful exploration of other possibilities has continued to occur. Here described are two well-defined novel plans, along with a reaffirmation of the more conventional one.

Throughout its existence, the CTCP has encouraged intelligent variation and experimentation in clinical training. The following statements were prepared on invitation from the Committee and are here brought to the attention of the profession as a whole in the hope of stimulating further thought and considered exploration along these lines and of insuring ultimately the most effective and practical type of internship program and over-all clinical training.

Committee on Training in Clinical Psychology
O. HOBART MOWRE, *Chairman*

AN EXTENDED PREDOCTORAL INTERNSHIP

What is a clinical psychologist? The answer to this question largely determines the type and extent of training which the clinical student should receive. My viewpoint is easily stated: The clinical psychologist is both a professional person and a scientist equipped to further our understanding of the human personality.

All of the official statements of the APA and its committees emphasize the importance of the conceptual leadership of the psychologist, pointing out that the psychologist has the methodological training and research interest necessary to develop a scientific understanding of the personality and its deviations. The Committee on Training in Clinical Psychology has recently issued this statement:

The greatest need, in our opinion, is for more tested knowledge; e.g., knowledge of the dynamics of personality development and psychopathology, of the etiology and of effective preventive and treatment measures for all of the complex psychological disorders of the human being. Graduate departments of psychology are not primarily interested in devoting their efforts to the training of persons who will function solely in rendering psychological services. . . . *A new group is needed which can bring its theoretical knowledge and research methods to bear upon the clinical problems of our population and which can, at the same time, enrich our theoretical knowledge as a direct by-product of its actual experience in dealing with people's problems. Thus actual clinical experience is a necessary complement to the theoretical structure of clinical psychology* [italics added] (3, p. 595).

These are fine words, but they bear little relation to present practice; clinical training is rapidly crystallizing in a form entirely inadequate for the realization of this approach. The battle-cry has been "first a psychologist, second a clinician," but our present program seems designed to graduate a person neither a psychologist nor a clinician. An adequate program of training, if more than lip-service is to be paid to the goals outlined above, requires five full years of graduate education.

We are scientists, or claim to be, and all science begins with systematic observation. If personality is a proper concern of psychologists, and if our research training is to have meaning, we must have the fullest possible access to the data of personality. One does not maintain conceptual leadership in a vacuum. The present official practice in

clinical psychology is to leave intensive training in psychotherapy out of the curriculum, making it a postdoctoral study. This apparently assumes that only those clinicians who plan to practice professionally as therapists have any need for this experience. This is selling clinical psychology short as a science. At present, training in psychotherapy is incomparably our best way of coming to terms with the data of the personality, and such training is an essential part of the preparation of the clinical researcher, the theorist, and the psychodiagnostician, as well as the professional therapist.

From the beginning, the leaders in personality theory have largely been men with some exposure to psychotherapy. From the days of Prince, Hall, and MacDougall to the days of Shakow, Dollard, Mowrer, Rapaport, and many others, psychotherapeutic experience has served as a "window to the personality." It is no accident that a surprisingly high percentage of the leaders in clinical psychology have had some form of personal therapy. In the past, this training was extracurricular. Now, before clinical psychology becomes tradition bound, is the time to insist upon adequate training. There is nothing sacred about the present four-year curriculum. The training we must have is that which will equip our students properly as basic scientists and as clinicians. The alternative, I am afraid, is to produce a busy band of semi-professional technicians, parroting a language taken at second hand from the Freudian writers.

I think that it is essential that every clinical psychologist know psychology in its development and present state. His training should be just as rigorous and thorough as that of the student in general psychology. For the first two years, the clinical student should "major" in general psychology. Learning theory, history, systems, perception, statistics, experimental method—none of these is unimportant to the future clinician.

In addition, the student needs a firm understanding of contemporary formulations of psychodynamics and personality theory. This means more than the usual course or seminar; it means a thorough, critical understanding of *all* current attempts to understand the human personality.

This is a heavy course of study; however, it is no more demanding than the present curriculum design, which (officially) includes all of this and,

in addition, many courses in testing techniques and many hours of practicum work.

At this point I shall probably shock the directors of clinical training: I do not believe in the value of most of the specifically clinical training offered during the first two graduate years. Let the first two years be devoted primarily to the essential theoretical academic background. If the student learns to administer the Binet, Wechsler, and Rorschach tests, that is enough. So far as interpretation is concerned, it can be learned much more easily and more meaningfully after a thorough mastery of psychodynamics. The cart still belongs behind the horse.

After the two academic years, I would introduce the student into a drastically remodelled two-year internship. During the first few months, he would be primarily occupied with psychodiagnostic testing. This could only be a tutorial type of training, with not more than four or five students for each preceptor.

At the same time, the student would be introduced into *clinical* psychodynamics with himself as subject. On entering the internship, the student would begin a program of intensive personal therapy. (I do not think the professional affiliations of the therapist of primary importance; I do think freedom from dogmatic attitudes essential.) At this point, the rather glib and intellectualized formulations of the textbooks would acquire new meaning—meaning in terms of real behavior, real guilt, real anxiety.

After the student had achieved some competence in psychodiagnostics, and had passed through the early stages of his didactic therapy, I would introduce him to psychotherapy. He would not see many people, but he would see them intensively, under close supervision. He would, in brief, become a clinician, sensitive to the levels of human behavior and aware of the disconcerting complexity of real people.

By this time, I think we would have a wiser, but very dissatisfied student: dissatisfied with the formulations both of academic psychology and of clinical practice. And this is the "divine" dissatisfaction which produces motivation for the basic research we desperately need. After this, the student would have a final year to integrate his experiences and to complete his doctoral research.

I believe that his dissertation would be worth reading.

Is anything less than this adequate training? We have attracted to clinical psychology a considerable share of the country's bright young people. Is it ethical or desirable to commit them to the status of semiprofessional laboratory technicians, as our present program comes dangerously close to doing?

There are valid practical objections to such a program as this, but they are not insurmountable, and, indeed, seem trivial, compared with the advantages. The increased time and expense involved will ultimately be reflected in increased competence and productivity, which should lead to adequate financial rewards. At present, the cooperating universities lack teaching personnel well trained in psychodynamics, and few internship centers have available good training in psychotherapy, but this need not be so. If the psychological profession wants this kind of training, it can get it.

The emphasis on general and experimental psychology during the first two years has the added advantage of allowing the undecided student time to explore both the clinical and nonclinical fields thoroughly before committing himself to one or the other. The lengthier program should somewhat lessen the attraction of clinical psychology as "the place where the money is" and should serve to make reward more commensurate with the investment of time and energy throughout psychology. But all else aside, the basic question remains: "Is anything less than this adequate training?"

AUSTIN FOSTER,
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ANOTHER INTERNSHIP PLAN

The internship is generally accepted as an integral part of the practicum training of the clinical psychologist. It differs from pre-internship practicum training in several important respects. (1) Its full-time character implies both intensive and extensive clinical work, a type of experience hitherto lacking in the student's training. (2) It affords the first real opportunity for experience as a fully accepted working member of a clinical staff. (3) By its very nature, it is throughout a continuing experience in working with other pro-

fessional groups. (4) It provides an optimal milieu for the development in the intern of both a feeling of social usefulness and a sense of social responsibility. (5) It affords the student the opportunity of working under a new group of supervisors whose outlook may be radically different from that of his university supervisors.

It was with full acceptance of the idea that the internship is a necessary aspect of clinical training and with particular concern for safeguarding its unique values that the Iowa department last year made the decision to place the internship in the fourth, rather than the third, year of the graduate training program. This shift to the fourth-year internship also involved explicit acceptance of the idea that the internship would *not* be a requirement for the PhD degree. The decision, which has entailed considerable initial inconvenience to both students and staff members, was made on the basis of a number of considerations. These considerations varied somewhat in importance but all coalesced to build an impressive case for the change. The major factors were these:

The question of personal maturity. It was felt that the more mature the student, the better able he would be to take advantage of the opportunities for scientific, professional, and personal development afforded by the internship. The additional pre-internship year at the University works in favor of the development of this needed maturity. It is true, of course, that a year is not a great amount of time and that, in any event, time in itself cannot necessarily be expected to work wonders. It is, however, equally true that in the case of the *typical* graduate student an appreciable amount of personal growth does take place in a year's time and that in the case of some *atypical* students, a single year of graduate study may mean the transformation of the "boy" into the "man." Thus, in general, the fourth-year intern will be a somewhat more mature person, who can more fully exploit the unique values of the internship and be better equipped personally to function as a co-worker on a clinical staff. In this respect, another point of some importance is that the psychological intern will more often than not already have the doctor's degree.

The question of pre-internship preparation. The shifting of the internship to the fourth year has obvious advantages with respect to preparing the

student technically for his internship work. The necessity for crowding all the requisite technique courses in the first two years of graduate study is avoided. This is a problem which has plagued every first-rate department. At Iowa, the change to the fourth-year internship has made possible certain improvements in the clinical training program. An orderly and logical sequence of psychodiagnostic courses has been established. Psychodiagnostic work is not started until *after* the student has had the basic courses in measurement, personality theory, and experimental psychology. The introductory practicum in counseling has been extended to an entire academic year.

The question of the dissertation. Under the fourth-year internship plan, the dissertation is started in the third year. In the majority of cases, it is completed at the end of the third year or during the following summer session. If it is not completed, the student is at least well over the "hump" and can finish the analysis of data or writing during the internship year. This arrangement has the effect, first, of clarifying the dissertation issue with respect to the internship center. We do not believe that the internship center should be expected to provide time, case material, clerical assistance, and supervision for the doctoral dissertation. The topic of the pre-internship dissertation is not seriously restricted since, if it is deemed desirable, the student can do his research in the clinical facilities associated with the department. On the other hand, it will probably have the effect (salutary, we believe) of tending to place the dissertation topic in the area of personality theory rather than in the practical clinical area. Moreover, it insures that the student's first major research will be characterized by a fully adequate experimental design. In our experience this has not always been possible in the case of the internship dissertation, where sometimes the exigencies of the clinical service set-up have required unexpected compromise of the design if the investigation was to be carried to completion.

The question of university-internship facility relationships. The fourth-year internship facilitates a definition of these relationships. Clarification with respect to the problem of dissertation has already been mentioned. We hope to place our interns in facilities which have active research programs and will expect that the students' re-

search training will be continued by participation in such a program. In general, we envisage the internship center as providing a type of experience which the university (except insofar as it has its own affiliated internship facilities) cannot provide. With these values in mind, our judgment of an internship facility is a global one. It is either first-rate or it is not. We have no inclination to exert any official supervisory or consultative function with regard to the internship facilities to which our students go. This, of course, does not preclude a mutually advantageous and friendly "give-and-take" relationship between the two training centers.

Questions of continuity of training, identification, and geography. The fourth-year internship provides certain advantages in these respects which were lacking in the third-year internship. Geographic factors cease to be a problem since the student will not be returning to the university. Thus, the married student is free to go to the internship facility best fitted to his needs and is not tempted, because of personal factors, to take a local or near-by internship. When the student leaves for internship, he shifts his "allegiance," so to speak, and becomes a member of the staff of the clinical service facility, and is not merely a university student spending a year there. This matter of identification, which follows the medical internship pattern, seems to us to be of importance in the development of the professional psychologist. Continuity of training is facilitated by the fourth-year internship. With the current rapid development of postdoctoral residencies, the future pattern of clinical training is already fairly well outlined. The fourth-year intern will be able to step directly into a training appointment of greater responsibility or of specialized character if the opportunity arises.

The question of risks and disadvantages. One risk which has been mentioned in connection with the fourth-year internship plan is that in a "seller's market," as at present, the student will be tempted to take an unsupervised position rather than continue his training. This is a hazard, but we do not believe that it is as important as it is sometimes made out to be. The level of aspiration of the typical student in a first-rate school is too high to permit this to happen very often. The increasing importance of ABEPP also exerts a

controlling influence in this regard. Finally, students can be discouraged from taking this step by the simple expedient of refusing to recommend them for such positions. An alleged disadvantage of the plan is that one of the secondary objectives of the third-year internship, namely, the vicarious enrichment of the experience of the university staff via the returning intern, is lost. This is true. We shall miss the stimulus-value of our better post-internship students. However, we believe this to be a factor of little importance. A university clinical staff which depends for its continuing education upon returning interns is in a sad state indeed.

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THE CONVENTIONAL PLAN RECONSIDERED

There no longer seems to be any doubt that field training constitutes an important part of the education of the future clinical psychologist. There seems to be general agreement among psychologists that this practical aspect of training is important and indispensable to the development of a well-rounded applied psychologist in the clinical area. Only a few diehards still believe that the academic preparation suffices for the PhD. According to them, all other preparation will take place "on the job." They believe that any well-trained academician will be able to apply his knowledge successfully in any practical situation, be it industrial, military, or clinical. The vast majority of psychologists, however, will not subscribe to this view. They believe in the need of supervised experience in an actual working situation as a part of the psychologist's professional preparation.

The Boulder Conference (2) has recently defined and summarized the conditions and contents of a good internship program as an integral part of the training for the PhD degree in clinical psychology. The conference has emphasized that mere laboratory or even clerkship experiences are insufficient preparation for the student who, following graduation, becomes a staff member of a clinical facility: There is a need for the advanced graduate student (third or fourth year) in clinical psychology to obtain supervised experience in an actual clinical setting with real cases requiring psychodiagnosis and/or psychotherapy. This in-

ternship is to supply the student with intimate, intensive, and long-term contacts with clinical problems and to give him the opportunity for some independence and development of self-confidence in a service situation. It is also to facilitate the student's functioning with other professions and aid him in communicating his findings to his colleagues and others concerned.

The internship, moreover, can be an important factor in the development of the clinical psychologist as a scientist. It offers him the opportunity of getting acquainted with *human* "life problems" as distinguished from those frequently dealt with in the psychological laboratory. As a consequence, his research for the dissertation, following the internship, may be more relevant from the viewpoint of society than many a problem examined and investigated by psychologists. To be sure, he may be faced with difficult methodological problems in handling clinical data for research purposes. But this is all to the good, since contributions in this area are so badly needed.

Internship training is significant in the preparation for the three functions of the clinical psychologist: diagnosis, therapy, and research (2). Admittedly, it creates an ambivalence in the trainee—"Are we scientists or clinicians?" (4)—and precipitates within him a certain feeling of divided loyalties, to the training university on the one hand, and the clinic, on the other. This combination is, indeed, a difficult experiment. We have committed ourselves to this experiment in integrated professional and scientific training, and it is possible that the very combination of aims in the training of clinical psychologists attracts so many trainees to the field.

We are demanding of the student at least four years of graduate work including one year of internship. Thus, the number of years of preparation for the infant profession of clinical psychology exceeds that of older professions and equals some of them. As a matter of fact, the four-year period is a bare minimum. Many directors of clinical training programs emphasize the fact that most trainees are unable to finish all their work, including the internship and dissertation research, in the four years. It takes longer than that. In view of these facts, it appears rather unreasonable that the student in clinical psychology be burdened with more than one year of internship. An in-

crease of internship time would prolong the period of the student's economic and psychological dependence, would clog the few available good internship facilities for long periods of time, and would make the program even more formidable than it is. Even such professions as medicine do not require more than one year of internship for their practitioners. To be sure, we may recommend *residencies* for specialization in clinical psychology, *after* graduation; but beyond one year's internship, the trainee may reach a point of diminishing returns and experience considerable dissatisfaction with his subsidiary status.

At the same time, it is quite essential that the internship be served *before* the student obtains his doctorate. The PhD degree of a clinical training program should be an indication, not only of academic achievement, but of a degree of competence in the application of clinical psychological techniques as well. If the degree is granted before the internship is served, such competence in the performance of clinical functions upon the part of the fresh clinical psychologist cannot be assumed. There is also the danger that once the student obtains his degree, he may not wish to receive *supervised* experience in a clinical setting and may proceed with clinical work in an independent or semi-independent manner. Such a procedure may result in no little harm to the profession as a whole. Nowadays young PhD's in clinical psychology are placed in responsible supervisory and administrative positions. It would be a great temptation for the graduate without the internship experience to proceed with the fulfillment of such functions, for which he had no practical preparation. Moreover, lack of experience in interprofessional relationships and in the application of professional ethics may be further cause for alarm in the event such graduates are left to their own devices after the degree is granted.

Another point, alluded to above, must be re-emphasized. It has to do with the quality and content of the research for the doctoral dissertation. If the internship is served in the third year of graduate training, as is the common practice at the present time, the student may be able to make use of his accumulated clinical experience in the selection of a problem. He may be able to use the internship station for the collection of data and obtain the assistance of his supervisors in the

formulation of his problem and its design (5). He has the opportunity to do *relevant* research in the field of human psychology. If the internship is postponed until after the research is done and the degree is granted, much can be lost researchwise. The student, with meagre clerkship experience, if any, is not in a position to select a clinically relevant problem for his research. He may continue, like many of his predecessors in the field, with "piddling," irrelevant academic problems in the tradition of psychological research sterility. With the internship, the research may become reality based and clinically relevant.

It is widely admitted that the methods of selecting students for clinical training are imperfect and inadequate. We have little to go by except for some standardized tests, which presumably predict academic success, and the undergraduate academic record itself. We have little information as to what makes a good clinician and how such potentialities in a student may be detected. Occasionally, students themselves do not discover their real adequacy and potential as clinicians until they have actually "come to grips" with clinical problems in the internship situation. Students who experience difficulties in the clinical setting have an opportunity, to some extent, to change and redirect the course of their academic program and research in areas in which they feel more comfortable. They are thus given an opportunity for "reality testing" which is avoided when the internship is postponed till much later, after graduation.

Clinical psychology is a growing and developing profession. Its boundaries are not set and many persons who teach in the field do not have a great deal of experience in it, nor do many continue with *current experience* in the clinical area. The return of students from internships, from the "firing lines," so to speak, and from interdisciplinary contacts may have a refreshing and rejuvenating effect on many a faculty member with beginning "sclerosis." There is a definite salutary effect to be derived from such a relationship.

Unlike medicine, clinical psychology is not fully crystallized and the clinical training programs at the universities, unlike the medical schools, are not merely in the business of supplying a stable profession with practitioners. The clinical training programs have a dual responsibility. On the one hand, they must supply a growing profession

with competent persons. In other words, the universities must recognize and fulfill a demand for services and be realistic about it. Unfortunately, some schools, even on the "approved list," show a cultural lag and refuse to give their trainees experience and competence in techniques (e.g., projective) which they deem unscientific, thus remaining heedless to the practices and demands of the existing facilities which utilize the trainees' services. On the other hand, the clinical training programs have a sort of mission to formulate and mould the profession and not merely to accede to certain service demands. Only by keeping in close touch with the clinical realities through students serving internships and returning for further instruction and research, can there be a healthy exchange of ideas and reciprocal relationship fulfilling the dual function.

Training in clinical psychology cannot remain an ivory tower activity unaware of the world's realities. Yet, a part can also be taken in shaping

those realities. A great deal can be lost by divorcing the academy from the clinic, the training program from internship, theory from practice.

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A SURVEY OF GRADUATE SCHOOL OPINION REGARDING PROFESSIONAL TRAINING BELOW THE DOCTORATE LEVEL

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AT the request of the APA Committee on Professional Training below the Doctoral Level,¹ the author undertook to canvass all graduate psychology departments with respect to their practices and attitudes toward nondoctoral professional training. A questionnaire was prepared and mailed in December 1950 to 144 departments listed on the addressograph file of the APA office. Within a month prompt and cordial replies were received from 80 departments; a second solicitation secured response from 44 more departments, bringing the total to 122 or 84 per cent of the original list. No selective factor is apparent in the list of nonrespondents.

Recognizing divergent trends in professional training, the questionnaire was divided into two parts, each of which followed the same outline of questions. The first section focused upon elective specialization at the master's level; the second sought information upon more rigidly structured curricula leading to specialized graduate degrees other than the MA, MS, or PhD. Regrettably, this duplication of questions caused some confusion.

One fundamental concern of the committee centered in the number of the recipients of these nondoctoral psychological degrees. To avoid undue clerical effort, and yet to be sure that our data held current significance, we requested the number of such degrees granted in the five-year period 1945 through 1949. There were reported 3,133 degrees of the MA or MS type, and 689 degrees of the specialized curriculum type. This combined total of 3,822 degrees below the doctoral level is, notwithstanding, less than the more complete three year total of 3,971 such degrees reported in the January 1951 *American Psychologist* by Helen Wolfe in her survey of "Graduate Training Facilities in Psychology 1951-52." Both sets of sta-

tistics reemphasize the problem of the nondoctoral "psychologist" as it bears upon the American Psychological Association. On the one side, there is indicated the extent of the educational machinery now committed to training at this level; on the other, there is suggested a considerable bank of potential technical assistants, or of possible competitors for available positions. In contrast, Wolfe reported the completion of only 638 doctorate degrees within the three-year period.

A second concern of the committee dealt with the proportion of graduate study time devoted to core classwork as contrasted with training in specific techniques. The question as phrased in the questionnaire proved to be ambiguous: "Hours of specialized technical subjects" was interpreted too frequently to include all graduate courses in psychology as elected in completing the master's degree. The question was clearer in the context of the specialized degrees: there the modal reply indicated that about half of the required time was spent in technical training. However, internships or practicums were reported by only 16 institutions.

A third concern of the committee focused upon the types of specialization available within the graduate curricula of the degree granting institutions. The results of this inquiry are summarized in Table 1.

A fourth concern of the committee was directed toward the fields of occupational placement available to persons with subdoctoral training. Each respondent was requested to name two or more occupational areas in which persons with this level of training might expect to find employment. The 263 job areas named in the replies have been consolidated into 31 classifications, as shown in Table 2, with frequencies of mention given by geographical area. Supplementary comments suggest that while most respondents are aware of some placement possibilities at the master's level, and while a few institutions have structured curricula prepar-

¹ E. S. Bordin, L. D. Hartson, C. E. Jurgensen, H. P. Longstaff, Wilson McTeer, S. L. Pressey, G. S. Speer, chairman, L. N. Yepsen.

ing for specified technological roles, still considerable uncertainty persists regarding the continuance of this occupational market.

The questionnaire concluded with a request for comments. Ninety-six of the 124 respondents gave expression to some phase or phases of their attitudes concerning training at this level. The various commentators dealt with many facets of the problem, but with no over-all sequential organization. The two major topics discussed were: (1) Professional placement opportunities of the person with subdoctoral training as compared with the PhD or EdD in psychology. (2) The mode of professional training for the subdoctoral specialists as compared with that for doctoral candidates. In the following summary, supplemented by significant quotations, opinions on these and subsidiary questions are presented and their agreements and disagreements are brought into juxtaposition.

Professional placement opportunities

Present and future placement market. Wayne Dennis, University of Pittsburgh, states: "We feel that while some people without PhD's are currently employed in psychology, this fact represents a transitional phase in our profession. People currently without the PhD degree are limited in the extent to which they can advance professionally. We feel that persons without the ability to earn a PhD should not be called psychologists, and that those engaged in psychological work who have the ability to do so should complete the doctorate." Similar comments were offered by Heinz Werner, Clark University, and H. L. Baker, Kansas State College. A contrasting view is presented by Adelbert Ford, Lehigh University: "... The shortage of psychologists at the PhD level is now so acute that a large number of jobs will be filled with individuals who have something less than the doctoral training ... and many quite reputable colleges are filling junior instructorships with such men on the basis of an evaluation of postgraduate credits beyond the MA." Similar statements with more emphasis upon probable future need were offered by J. G. Keegan, S.J., Fordham University; Gertha Williams, College of Education, Wayne University; F. T. Perkins, Claremont College; W. S. Dysinger, MacMurray College; G. M. Peterson, University of New Mexico; W. A. Hunt, Northwestern University; and H. B. Reed, Fort Hays Kansas State College.

Limitations of subdoctoral specialists. Gertrude P. Driscoll, Area of Psychological Services in the Department of Guidance, Teachers College, Columbia University, reports that: "... The faculty decision (1947) to abolish the terminal MA degree was based upon the following rationale: (1) Any diagnostic instrument used by a psychologist is only as valid as the clinical judgment of the psychologist using the instrument. (2) Sound clinical judgment is developed only through (a) thorough understand-

TABLE 1

Areas of concentration of specialized course work

"Elective" Masters	
Concentration available	Frequency reported
Clinical*	76
Educational*	50
Personnel*	48
Counseling*	57
Industrial*	47
Experimental	25
Psychometrics	13
Social Psychology	9
General	7
Child and Adolescent	4
Comparative	3
Physiological	2
Personality and Social	2
Also mentioned once each were:	
Learning	Genetic
Speech Correction	Remedial Reading
Pub. Sch. Exmnr.	Exp. Psychopathology
Predoct. Clinical	Marriage Counseling
Student Personnel	Opinion Polling
Human Engineering	Advertising

Required Curriculum Degrees	
Concentration available	Frequency reported
Clinical	20
Personnel	10
Industrial	5
Measurement	4
School Psychologist	4
Guidance	6
Educational	5
Social	2

Also mentioned once each were:

Speech Correction
Speech Pathology
Counseling
Vocational Counseling

* Starred items were listed on the reply sheet available for checking.

ing of theories of personality adjustment and learning, (b) experience under supervision with a wide variety of cases ranging from the individual who functions in a relatively normal manner to the true psychotic, (c) experience in using diagnostic procedures, (d) opportunity for the student psychologists to develop ability to make sound clinical judgment based upon data secured from many sources. (3) An inadequately trained psychologist presents a source of danger to individuals, to communities and to the profession."

F. C. Sumner, Howard University, states: "My opinion is that professional training below the doctoral level should

TABLE 2

Subdoctoral jobs and frequency of mention by geographical areas
(+ indicates specialized curriculum available)

Type of Job	East	Midwest	South	Mtn.	West	Total	Area Total
Clinical	7 +1	8 +4	9 +4	3 +1	5 +1	43	
Mental hospital		1	2	1	1	5	
Clin. technician	1	1	1			3	
Social agencies				1		1	52
Psychometricians	12	8	3	2 +1	1 +1	28	
Statisticians	1	1				2	30
Industrial	11 +1	8	7 +4	1	3	35	
Personnel	4 +1	12 +4	4 +2	2 +1	1 +1	32	
Tester in industry		1				1	
Employment agency		1				1	69
Guidance	2	3 +2	+1	3	1	12	
Counseling	5 +1	6 +2	6 +1	2 +1	5 +1	30	
Vocational counselor		1				1	43
Educational	1	4	+1	3 +2		11	
School counselor		2				2	
School psychologist	1	5	1		4 +2	13	
Special classes	3		1			4	
Remedial reading	1 +1					2	
Educational director		2				2	34
Teaching	+1					1	
College teaching	6		1			7	
Junior college		4	3			7	
"High school and College"				1	1	2	17
Government							
Research Assistant	5 +1					6	
Experimental	4					4	
Veterans service	1					1	
Military rsch. tech.	+1	1				2	
Civil Service		1	1			2	15
Applied experimental	1				1	2	2
Advertising		1				1	1
Social psychology		2				2	2
Physiological				1		1	1
Total of job names mentioned							263

not be attempted: such training to the Master's level is usually founded on a scanty knowledge of general psychology mostly of undergraduate level; it is attractive to students of the weakest intellectual caliber; it prepares for low level, dead-end jobs in the profession; it appeals strongly to the savior-complex in adolescent minds. I believe the Master's degree work should lay a solid foundation in tools and knowledges such as will enable the post-Master student to specialize in any direction he likes. I belong to the extreme school which believes that professional training (clinical, etc.) should be done in medical schools." Similar opinions with less explicit phrasing were expressed by Elsa E. Robinson, New York University; K. F. Muenzinger, University of Colorado; A. A. Schneiders, University of Detroit; and H. H. Anderson, Michigan State College.

Occasional defendants of MA practitioner. M. K. Walsh, University of South Carolina, observes: "It goes without saying that there are many well-equipped practicing clinical psychologists who do not have a doctorate, though

many of them have at least one year beyond the Master's. While this does not in any sense justify the lowering of standards for psychologists, I think it might not be too far fetched to point out that there are numerous physicians practicing psychiatry who fall very, very far short of the accepted standards of training in this field." M. E. Bonney, North Texas State College, and Nicholas Hobbs, Louisiana State University, make similar comparisons for subdoctoral persons doing counseling work in the schools.

Economic factors. (a) Present salaries in certain regions do not warrant PhD preparation. C. W. Mann, Tulane University, gives explicit statement to this as follows: "For some time to come there will be a demand in the deep South for persons trained to the Master's level in psychology. Few state jobs (in the South) call for PhD, and few states are willing at present to pay PhD salaries." S. C. Erickson, Vanderbilt University, and Nicholas Hobbs, Louisiana State University, support this position.

(b) Present salaries in certain job categories do not

justify PhD training. Q. F. Curtis, West Virginia University, points out that: "... There is a limited demand for these persons (clinical masters) in State Mental Hygiene Clinics. At the salaries offered, or in prospect, better trained persons cannot be had. I do not personally object to professional training below the doctoral level, corresponding to that given the social worker, medical technician, etc. Our staff is divided on the point, however, and we have not offered a specialized MA as yet." N. H. Kelley, University of Louisville, commented in a similar vein; as did D. A. Worcester, University of Nebraska, regarding school psychologists in Nebraska.

(c) Subdoctoral training is adequate for certain job classifications. F. T. Perkins, Claremont College, comments: "Although in some respects it would seem desirable to have training at the PhD level for a much larger number of positions than is true at present, it is our opinion that many positions requiring psychology training will continue to exist at the MA level. This is especially true in California in clinical jobs with the public schools. The school psychologist is defined at the MA level. . . ." N. D. Warren, University of Southern California, confirms this statement as it applies to California.

H. L. Baker, Kansas State College, lists in addition "... psychometrists in college guidance bureaus or in state civil service positions; and persons qualified to enter business or industry by some competence such as accounting, salesmanship, or secretaryship and through that avenue enter into personnel work." Elsa E. Robinson, New York University, mentions "certain levels in industrial and personnel psychology; possibly, too, in social psychology." H. H. Anderson, Michigan State College, feels that his MA's in *industrial psychology* are meeting their responsibilities satisfactorily.

A. I. Gates, Department of Psychological Foundations of Education, Teachers College, Columbia University, comments that "a goodly proportion of students who take a Master's degree in educational psychology later specialize in some phase of psychological work, such as vocational counseling, deans of men or women, supervisors of classes for exceptional children, teachers in nursery schools, kindergartens, or even upper grades and high schools. A certain number also become specialists in remedial reading. . . ." H. V. Cobb, University of South Dakota, and Ray C. Hankman, University of Maryland, mention several of these areas; and R. A. Brotemarkle, University of Pennsylvania, adds "speech correction teachers."

Sex related factor, without regard to area of specialization. W. S. Dysinger, MacMurray College, states: "MacMurray College is an institution for women, and most of our graduate students are women. Few of them are interested originally in so extensive a period of preparation as the PhD in Clinical Psychology requires. So long as reasonable placement opportunities are open to those with the MA degree, a number of highly competent young women are interested in work to the Master's level. The most competent of this group begin to consider more advanced work as their study progresses. Those who do not plan an early marriage are likely to give this possibility serious consideration." Robert J. Havighurst, Committee on Hu-

man Development, Social Science Division, University of Chicago, expresses a similar point of view.

Job analyses. H. B. McFadden, University of Wyoming, W. C. H. Prentice, Swarthmore College, and A. C. Anderson, Ohio University, in general agree with the departmental view expressed by D. A. Grant, University of Wisconsin: "... It was felt that detailed job analyses should be carried out to see what is actually going on before the problems, if they exist, could be assessed." J. G. Miller, University of Chicago, gives a more emphatic statement: "It is my personal opinion, and I believe it is also the opinion of the majority of the Department that there is a greater need at the moment to find whether our psychological techniques are valid than to train large numbers of service workers to carry them out. I believe we should make a careful job analysis of the requirements for psychological service workers below the doctoral level before we undertake such professional programs. Eventually I believe such programs will be needed." In this context, D. A. Grant, University of Wisconsin, gives expression to a personal opinion that amounts almost to "educational" heresy: "... there is a great deal to be done in all areas of psychology by students trained at the BA and MA levels. Within some limits, the individual is almost as important as the training!"

Status within the psychological profession for the non-PhD. R. M. Elliott, University of Minnesota, states: "We earnestly hope that no moves of the APA will be on the supposition that the jobs for which we are training MA's are unimportant or likely either to disappear or to attract PhD's in the foreseeable future." W. A. Bousfield, University of Connecticut, and D. A. Worcester, Teachers College, University of Nebraska, likewise urged that holders of the MA should continue to be recognized as essential to the profession.

Subdoctoral professional training contrasted with doctoral research preparation

A pronounced difference of attitude was present in the comments from established doctoral research training departments as contrasted with those which came from the smaller or newer graduate departments which are committed to serve a given student clientele, or which have limited staff with few facilities.

Comments from doctoral research training departments. Carl I. Hovland, Yale University, gives a moderate statement of specialization on the PhD: "It is our opinion that greater efficiency of instruction would be obtained if institutions with facilities for offering PhD's concentrated on these and other excellent institutions not so equipped concentrated on Master's training." Similar positions are taken by E. B. Newman and G. W. Allport, Harvard University; Heinz Werner, Clark University; T. A. Ryan, Cornell University; C. C. Pratt, Princeton University; B. von Haller Gilmer, Carnegie Institute of Technology; C. T. Morgan, Johns Hopkins University; J. G. Miller, University of Chicago; W. A. Hunt, Northwestern Uni-

versity; Paul R. Farnsworth, Stanford University; M. A. Wenger, University of California at Los Angeles; and Neil D. Warren, University of Southern California.

Within this group, the MA, when offered, is variously defined—but not as a specialized preparation:

(a) At least two departments have *discontinued* the MA degree altogether. J. G. Miller, Department of Psychology, University of Chicago, reports that the degree was discontinued by that department in 1948. Gertrude P. Driscoll, Area of Psychological Services in the Department of Guidance, Teachers College, Columbia University, reports discontinuance of the MA in 1947 on the grounds stated above.

(b) Several departments look upon the MA as a *turn-away by-product* of the PhD program, aptly described by D. G. Ellson, Indiana University, as a "terminal consolation prize for those who cannot satisfy PhD requirements." A similar attitude is suggested in the comments of E. B. Newman and G. W. Allport, Harvard University; T. A. Ryan, Cornell University; G. R. Wendt, University of Rochester; and, with less explicitness, in the replies from other major doctoral degree institutions. C. S. Hall, Western Reserve University, opposes this use of the MA degree. "... Nor do we feel that we should offer the MA as a consolation prize for students who can't make the grade to the doctorate."

(c) Other departments regard the MA as a *customary step toward the PhD*, or perhaps as an assessment before encouragement to continue to the PhD. C. S. Pratt, Princeton University, states: "... As a rule we ... accept only those students who expect to remain in the department for three or four years. ... The degree has no special requirements. If the student passes successfully the preliminary examinations for the PhD degree, he is entitled by that accomplishment alone to the MA degree. ..." C. T. Morgan describes a somewhat similar plan at Johns Hopkins University; A. L. Baldwin, University of Kansas, states a departmental uncertainty as to whether the MA should be required or omitted by PhD candidates. The assessment emphasis is stressed by D. G. Ellson, Indiana University: "As a trial requirement: A student whose research ability is in question but who satisfies other academic requirements for the PhD is required to complete an MA thesis so that his work can be evaluated." R. J. Havighurst, Committee on Human Development, Social Science Division, University of Chicago, favors a general nonspecialized MA degree in Human Development in part because "it permits screening of people so that only the better ones may be encouraged to go on for the PhD." R. A. Brotemarkle, University of Pennsylvania, regards the MA as "basically an assessment level for the doctorate."

Comments and questions from departments which offer terminal master's programs. (a) What specialized sequences should be offered? A preceding portion of this paper has reviewed some of the uncertainties felt by many departments who would be willing to develop terminal MA programs if they felt that they could thereby serve their community to a better advantage. We have also reviewed the specialized areas in which certain departments have satisfactorily ventured; and Table 2 summarizes the job areas named as available for this level of training.

(b) How should Master's candidates be selected? H. V. Cobb, University of South Dakota, states the problem in this way: "It is our experience that two types of students (and consequently, training programs) need to be clearly distinguished at the Master's level: (a) Those capable of work beyond the undergraduate degree, but not of PhD caliber, for whom the Master's training should be terminal. ... (b) Those capable of going on to the PhD, in which case training at the Master's level should emphasize experimental methods, psychological theory, and courses prerequisite to the specialty of the prospective doctoral training." J. G. Keegan, S.J., Fordham University, recognizes this distinction as the basis for development of further specialized course work at the MA level. Others specify that undergraduate preparation considered essential for acceptance into a graduate program without distinguishing between the terminal MA candidate and the postgraduate-oriented to the predoctoral program. W. S. Dysinger, MacMurray College, as quoted above suggests that young married women may be more likely candidates for a terminal MA than for a doctoral degree.

(c) What ratio of "core" and of "skill training" should be maintained? G. M. Haslerud, University of New Hampshire, states the dilemma: "How to give general enough training to provide for further growth after the MA and yet provide time for the acquisition of specific skills in testing, interviewing, etc.?" C. H. Smeltzer, Temple University, gives his view briefly: "It should be broad and not too specialized." H. E. Garrett, Columbia College, Columbia University, is in general agreement with this statement.

Adelbert Ford, Lehigh University, emphasizes a core program but allows time for specialization: "... Every MA should be interested in psychology first, and a specialist afterward or there 'will be no health in him.' We require a minimum of 10 semester hours of 'foundation psychology' on a Master's program of 30, and an undergraduate minimum of 21 semester hours on the transcript." W. A. Owens, Iowa State College, gives a similar statement; and F. T. Perkins, Claremont College, restates the dilemma in terms of "putting sufficient technical training in an MA program."

C. E. Skinner, School of Education, New York University, states an ideal—and a "reality" of the large urban university: "Departmentally, we think of the MA degree as being a specialized degree in the field of psychology but not, generally, in a highly specialized area. The emphasis is on theory, foundations, basic principles, rather than on any sub-area. We want ... a good psychologist, rather than the kind of 'specialist' who 'knows more and more about less and less.' We do not always succeed in turning out the kind of product that we believe in as we have day students and night students, part-time students and full-time students, students who really want to become honest and scholarly psychologists and students who want a few credits so that they can become (often against our protests) some kind of analyst, private practitioner, or tester for some testing outfit."

N. H. Kelley, University of Louisville, gave a thorough analysis together with one department's proposed solution

"(1) Social institutions have needs for psychologically trained personnel. There will not be enough PhD's to meet these needs for a long time. Further, to begin, many of these institutions and agencies will not be able to afford PhD's for the type of work they will initially ask of psychologists. (2) PhD professional psychologists will need subdoctoral people as assistants and for technical services both in institutions and in private practice. (3) No student should be permitted to go out into professional fields with one year of training. He should be given the basic training, not only in specialized skills, but also in general, experimental, and psychodynamics, in order to have sufficient basic competence to win the respect of other psychologists and the public. . . . Following the above conclusions, we decided to restrict our general MA degree to only those students who plan to go on for the PhD at another university and who, we judge, have a chance to be admitted. . . . We then planned a new degree: Master of Psychology. This is a two-year program, with registration for four semesters. Its purpose is to give adequate training to produce qualified technicians for technical and service functions in areas of applied psychology. . . ."

(d) How may the "terminal master's" be deterred from going on to a PhD program? John L. Kennedy, Tufts College, reviews the interesting experience of his department: "The government research laboratories in 'human engineering' are continually calling for able people at the MS level. Our greatest problem has been to find people who would be willing to terminate their graduate training at this level. Out of the eight we have trained for this type of job, only one is now working on contract research—the others either went on for the PhD at another institution (four out of eight) or are working in other fields." A. G. Bills, University of Cincinnati, expresses the problem more briefly: "It is difficult to get very good people who are willing to stop at this level."

Even though few would wish to enforce the implications of the above question, a note of caution is suggested for departments inclined toward specialization. The holder of the MA degree should be able to salvage a sizable portion of his graduate effort should he later be accepted into doctoral candidacy.

(e) What trends are indicated? J. G. Keegan, S.J., Fordham University, predicts possible expansion of specialized training at Fordham: "In the light of these con-

siderations (some students seek only the MA because of limited financial means or because they estimate that as their peak of probable achievement, and some candidates for the PhD have to be turned away at the MA level) and in view of the fact that positions are available for persons who do not possess the PhD, we have in this department discussed the possibility of revising our MA program to meet some of the specific demands for greater specialization at that level."

E. E. Cureton, University of Tennessee, reports on the contrary that: "We have moved away from the specialized MA in psychology and toward a degree based mainly on work in advanced general psychology, statistics, and experimental psychology."

M. R. Schneck, University of Arizona, is planning upon expanded training in psychological techniques for the near future. A. C. Anderson, Ohio University, expresses a concern of the smaller universities: ". . . Smaller institutions, such as ours, . . . experience difficulty in adding a multiplicity of courses designed for special professional training. . . . I question whether such institutions . . . should move rapidly in the direction of a high degree of professional training at the MA level."

Were it possible to compare the data of this questionnaire with similar data of ten years ago, there is little doubt that technical training at the MA level has expanded tremendously within the decade. The "technical master" and training to the technical master's level are likely to be part of our psychological profession for many years to come. The real question becomes that of the Association's attitude toward people with this level of trained specialization. Are we going to find a way to keep these people identified with the profession and therefore subject to our ethics and professional discipline? Or, are we to let them slip off into fragmented "specialty societies" to devise their own codes and ethics independently of those now being structured by the American Psychological Association?

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THE PROBLEM OF TEACHING INTERNSHIPS¹

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THERE has been an increasing interest in the problem of teaching at the college level. Nearly every trade or profession except college teaching has at least some form of supervised apprenticeship. This paper is concerned with this problem: Should we formulate a systematic program of practice teaching for degree candidates? If it is agreed that some such program should be devised, what form should it take?

Answers to these questions must be in the realm of opinion since research on the problem appears to be nonexistent. In such a case, "expert" opinion is desirable. The most logical source of such opinions on this problem was the already over-worked chairmen of PhD departments. Accordingly, a questionnaire was sent to 58 PhD department chairmen and 50 replies were received. This paper essentially represents a summary of these opinions.

First, is such a program necessary? In response to this question, 14 chairmen felt a training program for their candidates was necessary, 31 chairmen felt it would be helpful, and a minority of 4 felt that such a program would be unnecessary. To put the problem in more concrete terms, the chairmen were asked what proportion of their graduates seemed adequate teachers at the time of graduation. In addition to the interesting fact that most of the chairmen were not at all sure as to how many were or were not adequate teachers, those who were willing to make estimates (38 of the 50) indicated that an average of 40 per cent could be considered *inadequate* teachers on graduation from their departments. They further indicated, in response to another question, that many individuals whom they hired for their departments were inadequate teachers. Finally, from the candidates' point of view, it was indicated by 65 per cent of the

chairmen that teaching experience and capacity entered in as a major or partial criterion for hiring new personnel.

These opinions indicate a need for some program of teacher training. One of the most frequently suggested programs is that of practice teaching. How may such a program be formulated? Again, the department chairmen served as the basic source for answers to this question.

There was general agreement that such programs should start and remain at the predoctoral level. In response to the question of whether they were in favor of pre- or post-doctoral programs of teacher training, 43 were in favor of predoctoral programs, only 3 showed interest in postdoctoral programs. Four were resistant to either type of program.

A TEACHING INTERNSHIP PROGRAM

On the basis of the comments received from the department chairmen the following suggestions for the organization of a teaching training program are offered:

1. Assign supervision of teacher training to one staff member. Where possible, arrangements should be made for reduction of at least one class from his "load." Supervisor would direct the general program of training, maintain records on all trainees, supervise the classroom work of the trainees, and direct any teaching seminar for the trainees.

2. Determine which candidates anticipate full- or part-time teaching positions. At this point, some selection and possible reorientation of those who seem poor material for teaching should be made. Admissibly, with our limited knowledge of the predictors and requirements of a "good teacher," screening at this point must be rather crude. Nevertheless, even this crude screening does not seem to have been attempted.

3. Clearly state that the teaching ability of these candidates will be a criterion of proficiency. Such an explicit statement would aid in orienting the student toward directed effort in the area. It is recognized that the use of this criterion will vary

¹ This paper was presented in essence at the APA symposium of the Division of Teaching Psychology at the 1949 meetings. It was developed as a part of the activity of the Subcommittee on Teaching Internships of that Division. The author was chairman of this subcommittee. Arthur Irion, Tulane University, and Benjamin McKeever, University of Washington, were committee members.

in departments and with individuals. Some departments may wish to use it as a criterion for a teaching PhD, others merely as part of their job recommendations. Some students may, of course, counterbalance inadequacies in this area with other skills, and the weight given teaching must be flexible.

4. Utilize students (with or without stipends) in introductory sections, introductory discussion sections, experimental laboratories, and statistical laboratories. At a minimum, the students may be utilized in lecturing to regular staff courses. The latter situations suffer from their lack of similarity to the more typical classroom. These positions should be systematically rotated to cover as many types of courses as possible and to give the opportunity to as many graduate students as possible.

5. Systematically evaluate these job activities and maintain a record of these evaluations. Obviously, these ratings could be done both in the lecture room and on the basis of classroom presentation. Such records would be extremely useful for future job placement and highly valuable to the employer.

6. Use conferences and seminars in teaching for specific corrective action. The use of other departmental facilities, such as the speech department and education department, may be considered.

7. In instances where training does not seem effective reorient the student to some nonteaching job. As noted above our criteria are crude but we should not avoid the obvious.

The outlined program seems flexible enough and yet systematic enough to meet the major criticisms which are frequently leveled at such training programs. A few of the typical criticisms may be considered in relation to the suggested program. It has been stated that teaching the student to be a psychologist, and not a teacher, is the more important of the purposes of graduate training in psychology. It is felt that the suggested program may be integrated readily with existent academic programs and not interfere with them. Secondly, it has been suggested that education courses (semi-

nars in teaching methods, etc.) are typically "useless," "nontransferable," etc. The program outlined may be instituted independently of such courses and certainly on-the-job training has seldom if ever been criticized as "useless" or "nontransferable." It has further been pointed out that such a program may harm undergraduate training. This is a matter for research, but there is no evidence at the present to indicate that utilizing graduate students in a supervised manner in an introductory course has had such an effect. It has been noted that such programs involving evaluation and supervision may have an adverse effect on the morale of graduate students themselves. It may be argued cogently and conversely that better training programs would improve the morale of graduate students. A final argument has been that this is the job of education departments, not the job of psychology. Such an attitude seems exemplified by an ostrich sticking his head in the sand and hoping the problem will become tired and go away. What usually happens, is that someone comes along and plucks the ostrich's tail feathers. Teacher-training programs are a problem which must be faced. Either we formulate these programs on the basis of our own needs and understandings or they will be formulated for us by education departments or compromising academic committees.

The program suggested is, of course, little more than the cataloguing of the obvious, or a systematization of the apparent. It is far from the demands among the militant pursuers of the teaching problem who would ask for required internships, rigid selection programs and, as a goal, licensing of teachers. Perhaps, after further research, we may know the effects and limits of training and the criteria of selection and evaluation. Until that time this program probably would be effective in sensitizing ourselves and our students to the problem of teaching. It should aid in producing more adequate teachers in the present framework of our departments.

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A PRACTICE TEACHING PROGRAM FOR MA CANDIDATES IN PSYCHOLOGY

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IN many junior colleges, colleges, and universities, courses in psychology are taught by persons having only the MA degree, with no formal courses in teaching methods, educational philosophy, or educational psychology. This paper describes briefly a limited practice teaching course which we have introduced into our MA program in psychology at Bowling Green State University, and gives the reactions and recommendations of the students who have been affected by the course.

In introducing any new course, a major problem is that of the reaction of the administration. Fortunately, we did not run into any interdepartmental difficulties. The director of the graduate school was favorably disposed, and no opposition or expressed fear of usurpation of duties was advanced by any department or college in the university. However, the administration in general was not receptive to the suggested seminar. The chief objection was that, since Bowling Green does not offer the PhD degree, our graduate students did not need such a course. However, I pointed out that many college teachers of psychology do not have the PhD, and have never had any formal training in the teaching of psychology, or, indeed, in teaching anything. On our own staff at the time there were several such persons. When this was brought out, I was given permission to draft a proposal for a practice teaching seminar.

A new difficulty appeared when our curriculum committee noted that our MA candidates were already required to take a heavy course load. The committee was unwilling to make the proposed seminar a required course, and they felt that if it were made an elective course it would not be elected by enough students to warrant its inclusion in our catalog of course offerings. In view of this opinion, they would not approve a practice teaching seminar as a full-credit course, nor would they count it as part of the staff teaching load.

Despite this decision, which meant that our teaching loads would be considerably increased, we decided to go ahead. We already had in the catalog a repeatable graduate seminar, which ordi-

narily offered advanced study in such areas as learning, motivation, etc. It seemed reasonable to include professional preparation for teaching as one of the advanced areas justifiably covered in this seminar, although we could not devote the entire time of the seminar to it. Taking some of the seminar class periods for the lectures and discussions involved in a practice teaching program meant that the addition to our work loads would consist mainly of the supervisory aspects of the program.

The problem of who would be required to undertake practice teaching was resolved as reasonably as we could manage. We decided that all our graduate students in psychology would be required to teach except those who already had signed non-teaching contracts, as, for example, one student who had worked at the Lima State Hospital, and who intended to return to his job upon completion of his MA work.

The first time the teaching seminar was offered, in 1948-49, eighteen hours of class time were taken from the second semester of the regular seminar. The first six, three-hour meetings were taken for the lectures and discussions, with the thought that if these were conducted before actual teaching was done, the students would be better prepared for their teaching. The lectures and discussions followed very closely, in content, the summary given by Buxton in the May 1950 *American Psychologist*.

About the fourth week of the semester, the students began to prepare their teaching units, with the help of the professors who were to supervise their teaching. Each student was required to present three one-hour lectures, prepare and administer a test over his material, grade the test, and re-teach from the test. The regular professor was in attendance during the student's teaching, and as supervisor I attended the second or third lecture of each student. Wire recordings were made during class presentations. These recordings and observations provided the basis for individual consultation and later class discussion.

While the reactions of the students to this arrangement were, in general, favorable, some im-

provements were suggested. The main recommendation was that the time of preparation and teaching be spread over more of the semester. The next year, consequently, I spread the six lecture and discussion meetings of the teaching group over the first two-thirds of the second semester, with the students beginning their preparation for teaching almost immediately after the semester began. They were permitted to choose any topic included in the introductory course, their work being due whenever the professor to whom they were assigned came to their chosen topic in his own organization of his course. There was one good feature of this arrangement: since there was little duplication of topics chosen, the students did their teaching at various times during the semester. Thus, class members who had not yet done their teaching benefitted from class discussion of the work of those who had taught. Again, wire recordings were made of some of the lectures.

Student reaction was even more enthusiastic this time. Our students appreciated the opportunity to see teaching "from the other side." They learned a great deal about inter-faculty and student-faculty relationships. They approved the guidance given in preparing and presenting their lessons, and especially the many-sided views on these matters provided from the varied experiences of senior staff members. The teaching situation, with the reassuring presence of the supervising professor, helped to overcome anxieties about teaching, helped in self-expression under challenging circumstances, and contributed to the ability to think under the pressure of questioning from the classes. The students realized as never before the crucial fact that making concise, coherent, and accurate explanations depends in large part upon the preparation of the teacher.

Some good suggestions were made for improving the course. If all these suggestions could be carried out, it is likely that an almost ideal course would result. The students thought they should be given an opportunity to speak as lecturers to their associates before going into the introductory psychology classroom. Such warm-up periods, it was felt, would relieve some initially intense errors, eliminate some faulty methods and mannerisms, and improve understanding of subject matter.

The program was much too short, said our students. They wanted to teach more than one unit,

or to teach their prepared units to more than one class. They thought that association with several professors in the practice teaching situation would be more beneficial than association with only one. It was strongly felt that a full-time seminar should be devoted to this enterprise. More consideration of educational philosophy and educational psychology was wanted, with preparing papers, conducting seminar discussions, and free discussions with senior staff members in these areas mentioned as desirable. It was suggested that several different textbooks be used, one for each of several introductory classes, to give seminar students familiarity with, and practice teaching from, as many introductory texts as possible. In one or two cases, students thought they were not smoothly introduced to their classes, so that the problem of establishing contact with the class was unnecessarily difficult.

In general, along with the clinic and the laboratory, our students consider our practice teaching program of great significance in their professional preparation. It is of interest to note that graduate students majoring in related fields, such as sociology, have voluntarily taken part in our seminar and have expressed appreciation of its value for their own future interests.

In the three years during which we have carried on this program, there has been adverse class reaction to only one practice teacher. It is the opinion of the senior staff that this person does not have the necessary characteristics for becoming a good teacher. In all other classes, the reaction was all that could be desired. Voluntary evaluations of the practice teacher's work, written out and handed in by the students who were taught by him, have been most helpful and in every case have been fair.

Two years ago we gave an instructorship to one of the graduate students who underwent our practice teaching program and received his MA degree; last year we filled two vacancies in this way, and this year, one. These jobs are given with the understanding that they are for one year only of supervised on-the-job experience, with the students holding them to go on to their doctoral study after the year is up. This internship has become a regular feature of our practice teaching program, contingent upon our continuing to discover capable teachers among our graduate students.

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PSYCHOLOGISTS IN TEACHER TRAINING INSTITUTIONS¹

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AT its annual meeting in Denver in 1949 the Division of Educational Psychology of the American Psychological Association established a committee to investigate the present situation with regard to educational psychology in teacher training institutions. The committee decided that a direct inquiry addressed to teacher training institutions was necessary to secure the desired information. Accordingly, a letter was sent to the executive heads of all professional schools of education listed in *The College Blue Book*³ asking them to supply information about all psychologists on their staffs to include (1) name, (2) last degree earned, (3) institution granting the degree, (4) date of the degree, (5) official staff title, (6) names of courses taught, (7) other responsibilities as a psychologist.

For the purposes of the inquiry a psychologist was defined as a person (1) who is employed as a psychologist, (2) who uses the title of psychologist

in his work and (3) who majored in psychology in his graduate work. The intention was to include all psychologists who give instruction in educational psychology, child psychology, educational measurement and statistics, mental hygiene, clinical and guidance procedures, remedial techniques in school subjects, as well as those psychologists who are engaged in personnel or research work or who serve the institution as psychologists in any other capacity.

Altogether, letters were addressed to 387 institutions. Usable replies were received and tabulated for 339 institutions, a return of 87.6 per cent. Those not responding include institutions engaged in specialized types of teacher preparation, small private or sectarian institutions, and one or two large institutions. Most of the institutions in the two former groups probably do not have psychologists on their staffs and do not offer formal courses in psychology. It is believed that the returns represent virtually a complete survey of institutions engaged regularly in teacher training in this country.

The returns were divided according to the type of institution: state teachers colleges, departments of education in universities and colleges, Negro teacher training institutions, sectarian institutions, and private institutions. In those instances, where an institution might be both Negro, sectarian, and private, or any combination of these, they were listed in the first group in the order named. Finally, a miscellaneous group of 30 institutions consisted of those whose classification was doubtful or for whom the size of the faculty was not available. This miscellaneous group consisted of some large institutions as well as some small ones.

It must be admitted that in spite of the precision which the appearance of numbers appears to give,

¹ This paper is one of a series of studies undertaken by a committee of the Division of Educational Psychology to investigate the present situation with regard to educational psychology in teacher training institutions, and the study was undertaken with the aid of funds provided by Division 15.

² The committee of the Division of Educational Psychology consists of Horrocks, Noll, and Symonds, chairman. Symonds was personally responsible for directing the survey and for writing the report but the report is submitted as approved by the entire committee. Klausner was responsible for checking the membership status in the APA of the individuals reported in the survey. Appreciation is expressed to Gordon M. Becker for his preliminary tabulation of the data.

³ Huber W. Hutt. *The College Blue Book*. Published by Christian E. Burckel, Yonkers-on-Hudson, New York. Sixth Edition, 1950. This list was considered most satisfactory for the purposes of this inquiry on the score of completeness and up-to-dateness.

there are many irregularities in the returns that force us to recognize that this survey gives only a rough approximation to the actual situation. Some of the returns list only regular teaching faculty members; others include, in addition, officers of administration who are psychologists but not teaching and employees in clinics and institutes; and in some cases long lists of graduate assistants with teaching or clinic responsibilities were supplied, and, since these fall under the definition of psychologist as stated in the original letter, they have been included in the tabulation.

The committee did not take into consideration the possibility that psychology courses might be taught by persons who are not psychologists. Unfortunately, this appears to be a very widespread practice. In many institutions, courses in educational psychology and child psychology as well as other branches of psychology are being taught by individuals whose training has been primarily in education. Undoubtedly, they have had courses in psychology in their training and have read books on psychology since their training and have persuaded the administrations of their institutions that they are competent to teach courses in psychology. In a few instances, names of persons teaching psychology but not trained as psychologists have been indicated on the returns and in the tabulations. But in the larger number of instances, the names of persons teaching psychology courses to education students who do not meet any of the three criteria stated above were not included in the returns. This study, therefore, does not include facts about all those who are teaching psychology in teacher training institutions.

Another source of confusion concerned the relation of education and psychology departments in universities. In general, it was our policy to include only psychologists on the staffs of the teacher training institutions. In the case of some universities this decision was simple and clear-cut as students in the department of education seldom register for courses in the department of psychology. But in many other universities, the situation is more confused. Departments of education often depend on the psychology department to provide courses for education students. In each instance, the respondent was instructed that, for the purposes of this study, he should list the names of members of the department of psychology who offer courses that are taken in large numbers by

TABLE 1

Degrees held by psychologists in teacher training institutions

Degree	Universities	State Teachers Colleges	Private	Sectarian	Negro	Miscellaneous	Total
PhD	482	215	18	69	4	113	901
EdD	40	74	7	6	0	14	141
MA	134	189	29	65	17	52	486
MS	42	22	0	5	1	11	81
EdM	14	22	10	3	2	7	58
BA	19	7	1	7	0	2	36
BS	7	4	4	1	0	10	26
BE	1	1	0	0	0	0	2
Misc.	13	9	2	7	1	4	36
Total	572	543	71	163	25	213	1767

the students of the School of Education. At the other extreme, there are some situations in which all psychology offerings in the university are given in a department which is administered within the School of Education. All members of such departments have been included in the tabulation although some of them offer courses not regularly taken by education students.

Since the letters of inquiry were addressed to the administrative head of the institution and he, in turn, sent the letters to the dean of the school of education or to the head of the psychology department there is some lack of uniformity in the way in which the blanks were filled out. It is possible that in some states where the state university is scattered in a number of centers, as in California, or where extension work is done in a number of cities, as in Illinois, several names may have been omitted.

DEGREES HELD BY PSYCHOLOGISTS IN TEACHER TRAINING INSTITUTIONS

Table 1 gives facts with regard to degrees held by 1,767 psychologists in teacher training institutions. It may be noted that the doctor's degree is becoming an accepted requirement for employment as "psychologist" in a teacher training institution. In universities, the doctorate is held by 69 per cent of the psychologists employed, in state teachers colleges by 53 per cent, in private institutions by 35 per cent, in sectarian institutions by 46 per cent, and in Negro institutions by 16 per cent. In all institutions combined 94.3 per cent hold degrees above the bachelor's degree, which indicates that with surprisingly few exceptions graduate study

and a degree are requisites for employment as a psychologist.

An analysis of the dates of receipt of the degree has shown that 25 per cent of the doctor's degrees and 32 per cent of the master's degrees for which dates are available were granted within the past five years, indicating the staffs teaching psychology are young. A relatively large number of old-timers, holders of the doctor's degree before 1930, are still active, however.

TYPE OF APPOINTMENT AND DUTIES

In some institutions, there are individuals with appointments in both education and psychology. There is one state university in which no member of the School of Education has a degree in psychology, and oddly enough there are some members of the staff of teacher training institutions with degrees in psychology who are not teaching psychology. For instance, there is in a state university a psychologist who, as professor of industrial education, is teaching, among other courses, wood pattern making, wood turning, and design and construction of furniture. In another institution, student counseling, guidance, and testing are taught by a man who took his PhD in religious education with a minor in psychology. In one state university there are no psychologists in the School of Education and Nursing but members of the education faculty give courses in psychology in the psychology department. On the other hand, in many instances, psychologists who have had no background or training in education and no experience in teaching below the college level are teaching educational psychology.

Two hundred and forty-two psychologists, reported in this study, usually in addition to their teaching duties, hold various administrative posts. Some of these administrative responsibilities are concerned with psychology—administrative head of the department, director of the psychological clinic, counseling service, the VA program, and other special clinics. Altogether 51 were listed as having administrative responsibility for a clinic. But psychologists are also called upon to assume more general administrative duties including the responsibilities of a dean or being placed in charge of field work, the summer session, the placement bureau, the teacher training program and the like.

Apart from these administrative posts, there are a considerable number (359) who are rendering

psychological service of one sort or another including student counseling, testing and other guidance activities or who are engaged in recognized research activities for which part of their time has been set aside. And there are other duties less closely related to psychology which have been noted. Supervision of graduate research was specifically mentioned in 82 cases and probably there are those who may engage in or supervise research who did not list these activities.

It is the belief of the committee that the number of psychologists who have duties of a psychological nature other than teaching is far too small. As one peruses the returns, he is struck with the large number of institutions in which teaching is the only recognized responsibility of the psychologists on the staff. Certainly the contact of students with psychology in these situations must be extremely academic and bookish—the learning of theory which has only remote relation to practice. For instruction in psychology to be vital, an instructor should also have the opportunity to apply psychology in a practical way in his institution either by testing and counseling, by engaging in research, or by participating in clinical activities. Unless such enterprises are going on on the campus, psychology to the students will seem to be only another academic subject with little relation to the actual work of teaching, the schools, and education.

Table 2 provides a tabulation of the frequency with which courses are offered in different types of institutions. There was a considerable amount of arbitrariness in making the decisions with regard to tabulation. In general, a course was not tabulated under a given heading unless its title was precisely as given. Any variation of the title was tabulated under a miscellaneous heading. For this reason, the totals for any given course are an understatement. For instance, a total of 313 courses of child psychology have been tallied. But other courses, similar in nature but with some variation in the exact wording of the title, have been tallied under growth and development and child psychology (miscellaneous) lower in the table. To get the correct perspective with regard to courses on tests and measurements, one should refer to courses specifically labeled tests and measurements, educational tests and measurements, mental testing, and also the miscellaneous group of testing courses.

General psychology and educational psychology

TABLE 2

Courses in psychology offered in teacher training institutions

Course	Universities	State T. C.	Priv.	Sect.	Negro	Uncl.	Total
General	163	173	15	33	9	63	456
Educational	169	174	10	47	13	39	452
Child	99	143	16	30	5	20	313
Adolescence	51	87	3	19	7	14	181
Mental Hygiene	52	79	6	23	2	15	177
Guidance	42	34	2	9	2	21	110
Tests and Measurements	24	47	1	17	4	14	104
Abnormal	45	33	1	11	0	14	107
Clinical	53	15	0	18	2	16	104
Social	39	38	1	6	1	11	96
Personality	44	19	4	5	1	18	91
Counseling	49	16	1	3	0	15	84
Experimental	41	13	0	13	1	11	79
Applied	22	29	0	8	2	15	76
Statistics	38	10	0	10	0	14	72
Learning	42	18	2	4	0	6	72
Elementary Psych.	34	19	1	9	1	4	68
Growth and Develop't.	34	16	5	2	0	1	58
Adv. Ed'l. Psych.	36	5	0	3	1	9	54
Personnel	32	9	0	3	0	9	53
Ed'l. Tests and Msrm'ts.	27	22	2	1	0	1	53
Remedial Reading	21	20	1	2	1	4	49
Adjustment	17	16	2	4	0	4	43
Mental Testing	21	11	2	0	1	3	38
Research	31	3	1	0	0	1	36
Ed'l. Research	24	1	0	0	0	1	26
Ed'l. Statistics	14	6	0	2	1	0	23
Adv. Statistics	21	0	0	0	0	0	21
Individual Diff.	13	2	0	1	0	3	19
(Subtotal)	1,298	1,058	76	283	54	346	3,115
Education	118	88	10	22	0	17	255
General Psych. (Misc.)	127	38	8	26	3	35	237
Testing (Misc.)	119	36	5	16	0	27	203
Child (Misc.)	64	60	8	10	0	6	148
Research (Misc.)	58	22	9	11	0	14	114
Guidance (Misc.)	64	21	2	20	0	4	111
Clinical (Misc.)	71	9	4	2	0	0	86
Miscellaneous	28	21	6	3	0	20	78
Applied (Misc.)	41	13	3	7	0	10	74
Reading	37	11	1	1	0	2	52
Special Psych.	25	7	1	5	1	11	50
Speech	16	1	0	0	0	5	22
Group Dynamics	12	0	1	0	0	1	14
Teaching Psych.	2	0	0	0	0	1	3
	2,080	1,385	134	406	58	499	4,562

practically tie for first place in the number of courses given. However, one should also note in addition elementary psychology and the larger group of miscellaneous courses in general psychology, on the one hand, and advanced educational psychology on

the other. Apparently, it is the general practice to offer a course in general psychology as preparation and prerequisite for courses in educational psychology in spite of the fact that there is a large per cent of overlapping in the content of these two

courses. For example, one currently used text in general psychology has chapters on "The Problem of Development," "Emotion," "Motivation," "Learning," "Perception," "Thinking," "Reasoning," "Intelligence," and "Personality," all topics which would be found to constitute the principal topics discussed in a text on educational psychology.

There are all sorts of variations in practice. Apparently, there are some teacher training institutions which offer no psychology courses whatever to education students. But, in general, psychology is taught in most teacher training institutions. One college reports that "general psychology is really a term of general and educational psychology to meet the needs of students going into teaching." In one state university, all education students must take general psychology from a professor of psychology before they can take educational psychology from a professor of education.

The comparison of the frequency with which courses are given in universities and state teacher colleges reflects the different emphasis in these two types of teacher preparation. The state teacher colleges more frequently offer courses in child psychology, adolescent psychology, mental hygiene, tests and measurements, all of which apparently have been considered desirable in teacher preparation and probably are incorporated in a number of certification requirements. On the other hand, universities offer more specialized courses in abnormal and clinical psychology and in counseling; and courses in personality, experimental psychology, psychology of learning, mental testing, growth and development, and personnel psychology also are given more often by universities. Universities provide many more courses in statistics and methods of research, and advanced courses in educational psychology and statistics also appear almost exclusively in the university list.

The reader will undoubtedly make his own observations from the tabulation of courses. The committee can only point out certain trends which seemed to them particularly striking. Mental Hygiene has achieved an important place in the instruction in psychology and this is a healthy sign. One should link with this, courses in personality and the psychology of adjustment. On the other hand, one may question the justification for the course in abnormal psychology in the preparation of teachers. The inclusion of this course un-

doubtedly points to the interest in pathological mental processes and further information in mental pathology can be justified from the point of view of general education, but its application to the problems of teaching would seem to be a little remote. The recent rise in interest in the clinical applications of psychology is testified by the relatively high position of courses in guidance, clinical psychology, counseling. This is, on the whole, a healthy development and should help teachers to understand more intimately the nature of problems of adjustment and development. However, the value of these courses again can be questioned when they go too far in placing emphasis on problems of diagnosis and treatment of pathological conditions.

Perhaps there is somewhat more justification for the courses in social psychology particularly if they emphasize education's responsibility with regard to social processes and social change and if they throw light on interpersonal relationships in the classroom.

Probably the testing expert will regret the fact that courses in tests and measurements do not stand higher on the list. Certainly the problem of evaluation is important for every teacher and, unfortunately, in many centers of teacher training it receives scant attention. On the other hand, there is no doubt that in many centers the theory of testing has been developed and elaborated beyond the point where it has functional value in the preparation of a teacher, and survives because fetishistic value has been attached to it.

Similar comments could be made about the courses in statistics and research. Statistics apparently serves two main functions: (1) it is a tool for the handling and interpretation of the meaning in mass test results; (2) it serves as a tool in interpreting the results of research and experimental investigation. There are some who probably feel that courses in statistics and research play too small a role in the training of teachers; but there are others who would see them as receiving too great an emphasis even in the modest role that they play. No one would deny the need for training research workers in education and in training some teachers to approach their work in the spirit of research and investigation. On the other hand, it should be recognized that the majority of teachers are employed and expected to

teach and that they cannot be expected to have the inclination or time to undertake research.

The modest picture given to courses in the psychology of learning is probably in part explained by the fact that learning constitutes the major topic taken up in courses in educational psychology. Certainly, an understanding of the principles of learning should be for the teacher what the principles of mechanics and physics would be for the engineer. It is significant that courses in statistics come ahead of courses in learning.

It should be noted, too, that these psychologists also teach many courses in education just as many educators teach courses in psychology.

MEMBERSHIP STATUS IN THE AMERICAN PSYCHOLOGICAL ASSOCIATION

The 1950 Directory of the American Psychological Association was consulted in order to determine how many of these 1,767 psychologists were members. The class of membership was noted, and tabulations were made of membership according to degree held and title of the position. The divisions in the APA to which members belong were also noted and tabulated.

Table 3 presents the membership status in terms of degree held. Of most importance is the fact that 1,031 of the 1,767 individuals, or 58.9 per cent, were not members of the APA. This seems incredible inasmuch as those who were included in this study were either (1) employed as psychologists, (2) used the title of psychologist in their work, or (3) majored in psychology in their graduate work. One would expect to find the proportion of membership higher with those who hold the

TABLE 3

*Membership and non-membership in the APA
according to degree held*

Degree Held	APA Members	Non-APA Members
PhD	542	339
EdD	39	113
MA	97	387
MS	14	59
EdM	10	49
BA	2	38
BS	2	17
BEd	1	1
Other	8	24
Not given	31	4
Total	736	1031

TABLE 4

APA divisional membership

Division	Number of Members	Per Cent of Total Membership of the Division
General	71	13.8%
Teaching	28	14.5%
Experimental	58	11.2%
Eval. and Meas.	65	15.9%
Child. and Adol.	55	16.6%
Pers. and Social	53	9.4%
SPSSI	57	11.7%
Esthetics	6	9.8%
Clin. and Abn.	114	9.9%
Consulting	18	9.8%
Ind. and Bus.	22	7.6%
Educational	107	26.5%
School	29	11.4%
Couns. and Guid.	85	13.9%
Publ. Service	7	6.1%
Military	28	14.6%
Mat. and Old Age	23	16.7%
	826	

higher degrees but actually of the 881 holders of the PhD degree, 339 or 38.5 per cent were not members of the APA. Of the 736 psychologists who were APA members, 518 were Associates, 215 were Fellows, and 3 were Life Members.

Table 4 presents data on divisional membership. The distribution of membership according to division raises many questions. There are more who are members of the Division of Clinical and Abnormal Psychology than of the Division of Educational Psychology, and the number who are members of the Division of Counseling and Guidance Psychologists approaches those who are members of the Division of Educational Psychology. Apparently, the APA in general and the Division of Educational Psychology in particular do not serve the needs of these persons in any important way.

When these figures are looked at with respect to the total membership of the divisions, the per cent seems more reasonable—Division of Educational Psychology 26.5 per cent, Counseling and Guidance 13.9 per cent, and Clinical and Abnormal 9.9 per cent. On this basis, psychologists in teacher training institutions comprise 15.9 per cent of the membership in the Division of Childhood and Adolescence, 13.8 per cent of the Division of General Psychology and 14.5 per cent of the Division of the Teaching of Psychology. The small number and percentage who are members of the Division

of School Psychologists is hard to understand. The 14.6 per cent who are members of the Division of Military Psychology may represent a continuing loyalty to and contact with the service experience which provided the first important work contact with psychology. The relatively high percentage who are members of the Division of Maturity and Old Age (tying the membership percentage in the Division of Childhood and Adolescence) points to the interest in the problem of maturity among educators.

SUMMARY

1. The situation with regard to the teaching of psychology in teacher training institutions can best be described as confused. Many courses in psychology are being given by persons who were not trained as psychologists. It is the conviction of the committee that this situation should be reviewed and only those who have received major training in psychology should be permitted to teach psychology.

2. Practically all psychologists in teacher training institutions have had graduate training in psychology.

3. A large proportion of psychologists employed in teacher training institutions hold doctor's degrees.

4. There seems to be little distinction between psychologists who have the title of professor of psy-

chology and those who have the title of professor of education.

5. Most psychologists in teacher training institutions have no other responsibility than to teach. A few psychologists are employed in clinical and counseling positions. There are many who have other duties in addition to teaching including administrative responsibility both in psychology and more generally in the institution and in giving service in testing, counseling, and guidance in clinics and service bureaus. It is the belief of the committee that the teaching of psychology would be enriched if this practice could be extended.

6. General psychology seems to be rather generally taught as a prerequisite to taking courses in educational psychology. This long established practice has recently been subject to inspection and criticism.

7. Membership status in the APA of psychologists in teacher training institutions points to a woeful lack of professional interest in the national organization and/or to the fact that the APA does not contribute to the needs of these individuals. It may also point to the possibility that many are employed to teach and practice psychology in teacher training institutions who are not professionally trained and qualified for this work.

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TEACHING OF PSYCHOLOGY IN HIGH SCHOOLS¹

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THERE has seemed to be an increasing interest in the teaching of psychology at the secondary school level, but a review of the literature indicates that there has been no recent survey of what is being done in this field. The purpose of the present report is to bring up to date a general survey of the extent to which and the conditions under which psychology is taught as a separate subject in high schools in the United States. In addition, an attempt has been made to secure some measure of teacher and pupil evaluation of the subject.

PROCEDURE

In the summer of 1950 a letter was sent to each State Superintendent of Public Instruction asking for the name of the individual on his staff who would be best qualified to answer a questionnaire on the teaching of psychology in high schools. Questionnaires were sent to the state officials named by the 41 superintendents who replied. For the states from which no reply was received, the questionnaire was sent to the superintendent himself.

After various follow-up letters, questionnaires were returned by 47 states. Repeated attempts failed to bring a response from Idaho, but finally a response for that state was received from a principal known to be teaching psychology in his high school.

After data were collected and material organized, a report was sent to the state officials with a request for them to make any corrections or desired changes before publication of the report. All such changes are included in the present report.

Each state official was asked to furnish a list of high schools which taught courses in psychology. Returns were incomplete, but a mailing list of 453 addresses was obtained. In the spring of 1951 a questionnaire concerning training and teaching experience was sent to teachers in each of these

schools. Also, teachers were asked to evaluate the course in psychology.

In addition, teachers were asked to administer a rating scale and questionnaire to pupils in their psychology classes. Pupils were asked to evaluate psychology in terms of objectives of secondary education, and to indicate what they considered to be the most desirable length for such a course.

STATES IN WHICH PSYCHOLOGY IS TAUGHT

As is indicated below, psychology is taught as a separate subject of instruction in the high schools of 34 states. Following the name of each state there is indicated the per cent of high schools in that state offering courses in psychology. Figures in parentheses are approximate or the expression of opinion. At the end of the list there are given the states in which the official was unable to give either the exact or approximate number of high schools in his state which offer courses in psychology.

Kentucky	(25.0)	Montana	6.1
Arkansas	(25.0)	California	(6.1)
New Hampshire	23.9	Massachusetts	4.3
Oklahoma	16.2	Minnesota	(4.3)
North Dakota	15.5	New Mexico	(4.1)
Kansas	14.1	Florida	2.5
Iowa	(11.8)	New Jersey	2.0
Maryland	11.7	Ohio	(2.0)
Nevada	11.4	Illinois	(1.6)
South Carolina	11.3	Utah	1.3
Washington	(10.9)	Virginia	(1.0)
Missouri	(10.1)	North Carolina	0.4
Vermont	10.0	Idaho	—
Colorado	(7.9)	Indiana	—
Nebraska	(7.4)	Michigan	—
Maine	7.3	New York	—
West Virginia	6.8	Texas	—

The number of high schools teaching psychology ranges from one in Utah to approximately 150 in Kentucky. In the 29 states for which definite or approximate figures are available, 1,082 high schools offer courses in psychology. This is 8.4 per cent of the total of 12,939 high schools reported by officials in these states.

The official for Nebraska indicated that the number of schools offering psychology will be increasing

¹ This survey has been made as part of the work of the Committee on the Teaching of Social Psychology, Society for the Psychological Study of Social Issues. Victor H. Noll of Michigan State College assisted in the survey.

because the State Department is pointing out the desirability of semester courses in health, both mental and physical. In 1949 Texas approved psychology as a subject to meet the requirements for graduation from accredited schools. The New Hampshire State Department of Education reports that it has a committee which is working toward the development of material stressing the mental hygiene approach.

The official who answered the questionnaire for Connecticut stated that Connecticut should be listed as a state in which psychology is not taught as a separate subject. However, he did call attention to the fact that the Housatonic Valley Regional High School (Falls Village) offers a course called "Contemporary Problems." This course is required of all seniors. The time from September to the end of February is devoted to psychology, with the remainder of the year being devoted to sociology.

Psychology is taught as a separate subject of instruction in one high school in Alaska. It is not taught in Washington, D. C., the Canal Zone, or Puerto Rico. Repeated attempts failed to bring a response from Hawaii.

A more detailed report of this survey is made elsewhere (6).

SIZES OF HIGH SCHOOLS IN WHICH PSYCHOLOGY IS TAUGHT

In order to learn something further about where psychology is taught, the questionnaire included the question, "As a rule, is psychology offered mostly in small schools, mostly in large schools, proportionally the same in schools regardless of size?"

In 13 states psychology is taught proportionally the same in schools regardless of size. Definite or approximate figures available for 11 of these states indicate a total of 648 high schools teaching psychology. In 17 states psychology is usually taught in the larger high schools. Definite or approximate figures available for 15 of these states indicate a total of 297 high schools teaching psychology. In only three states, with a total of 137 high schools teaching psychology, is the subject usually taught in small schools.

THE COURSE IN PSYCHOLOGY

In all states in which it is taught, psychology is offered as an elective.

Of 31 states indicating a more or less definite pattern, one state (Massachusetts) usually offers psychology in the ninth and tenth grades, three states usually offer it in the eleventh grade, 12 in the twelfth grade, and 15 in the eleventh and twelfth grades combined.

In the part of the present survey in which a questionnaire was sent to 453 teachers, 147 usable replies were received from teachers in 26 states. Of this number, 1.4 per cent indicated that they taught psychology in the tenth and eleventh grades combined, 17.2 per cent in the eleventh grade, 19.3 per cent in the eleventh and twelfth grades combined, and 62.1 per cent in the twelfth grade.

Of 30 states indicating the number of semesters devoted to the study of psychology, 17 usually devote one semester, ten usually devote two semesters, and three devote either one or two semesters.

The questionnaire to teachers indicated that 64.8 per cent offer a one-semester course, 34.5 per cent offer a two-semester course, and 0.7 per cent offer a four-semester course. When asked to indicate the number of semesters which they believed should be devoted to a course in psychology, 24.8 per cent of the teachers expressed the opinion that the course should be one semester in length, 68.3 per cent indicated two semesters, 0.7 per cent three semesters, and 6.2 per cent four semesters.

Ninety-seven teachers in 24 states administered a rating scale and questionnaire to 2,783 pupils in their classes in psychology. Of 2,680 pupils indicating the number of semesters which they believed should be devoted to psychology, 12.9 per cent expressed the opinion that the course should be one semester in length, 57.2 per cent indicated two semesters, 5.3 per cent three semesters, 21.4 per cent four semesters, and 3.2 per cent more than four semesters. Pupils in two-semester courses favored more time being devoted to psychology than did pupils in one-semester courses.

Both teachers ($N = 103$) and pupils ($N = 2,783$) evaluated the course in psychology in terms of ten objectives of secondary education. A five-point rating scale was used. It ranged from five points for "Has made the greatest contribution of any subject I have studied in high school" to one point for "Has made the least contribution of any subject I have studied in high school." For teachers the mean rating on the ten objectives was 3.52; for pupils the mean rating was 3.43. Teachers and pupils were agreed that psychology contributes

most to the "Co-operation" and "Family Life" objectives, the mean ratings by teachers being 4.36 and 4.27 respectively, the mean ratings by pupils being 4.14 and 4.22 respectively. Teachers and pupils were agreed that psychology contributes least to the "Appreciation of Beauty" and "Consumer Problems" objectives, the mean ratings by teachers being 2.75 and 2.74 respectively, the mean ratings by pupils being 2.48 and 2.59 respectively. For the ten objectives, pupils in one-semester courses had a mean rating of 3.38, pupils in two-semester courses had a mean rating of 3.49. The significance ratio for the difference between one-semester pupils ($N = 1,587$) and two-semester pupils ($N = 1,196$) is 8.15.

A more detailed report of the survey of teacher and pupil attitudes toward psychology is reported elsewhere (7).

Credit for the course in psychology. Officials in 25 states indicated that credit for a course in psychology is usually granted in the field of social science, although some indicated that credit might be granted as an elective without necessarily being classified as social science. In addition, five states (Nebraska, New Jersey, New York, North Carolina, Virginia) grant credit as an elective or at the discretion of the principal without specifying the general field. In North Carolina the State Department of Public Instruction expressed itself as not being adverse to allowing credit as a social science. In Iowa and South Carolina credit may be granted as either social science or science. In Vermont credit is granted as science. The question concerning credit was not answered for Michigan.

Textbooks. Some states do not have textbook adoptions in any subject area and in others there are no adoptions for psychology although there may be adoptions in other fields.

Officials in nine states reported textbook adoptions in psychology as follows:

Florida, Kentucky, South Carolina—Sorenson and Malm (13)

New Mexico, Utah—Engle (4)

California—Averill (1), Crow and Crow (3), Engle (4), Langer (11), Sorenson and Malm (13), Woodworth and Sheehan (15)

Indiana—Averill (1), Crow and Crow (1), Engle (4)

North Carolina—Engle (4), Josey (10), Sorenson and Malm (13)

Oklahoma—Averill (1), Engle (4), Josey (10), Geisel (9).

In those states in which there are no adoptions, officials were asked to name the textbooks which they believed are used most commonly. Many officials were unable to answer this question but those who did tended to indicate the same textbooks as mentioned above. In addition, the following books were mentioned: Bliss (2), Roberts (12), Tiffin-Knight-Josey (14).

An analysis of subject matter presented in high school psychology textbooks has been made by Engle (5).

QUALIFICATIONS OF TEACHERS

In nine of the 34 states in which psychology is taught, there are specific requirements for a license to teach the subject. Florida requires 12 semester-hours, Nebraska requires a minimum of 15 semester-hours' training in psychology. Missouri requires a social studies major, including courses in psychology. Minnesota requires a major or minor in the field. In Montana teachers must instruct only in their major or minor fields of preparation, the preparation for a major being 48 quarter-hours, the preparation for a minor being 30 quarter-hours. In addition, 24 quarter-hours in education are required. In Indiana psychology may be taught by anyone holding an administrative or social studies license, but no courses in a department of psychology are required for either of these licenses. New Hampshire has a general requirement of 18 semester-hours for teaching in any field, including six hours' preparation for each specific subject to be taught in the field. However, if only one or two periods per day are devoted to teaching any one subject, six semester-hours of training are required in that subject. Probably this latter requirement is the one met by most teachers of psychology. New Jersey requires certification in guidance. For certification as a "Guidance Director" there must be 48 semester-hours' advanced training of which 12 must be from a list of specified courses in psychology. For certification as a "Teacher-Counselor" there must be a minimum of 18 semester-hours credit in courses in psychology and guidance, six of these hours being in courses in psychology and educational tests and measurements exclusive of courses in general and educational psychology. Virginia requires a total of 24 semester-hours in psychology, six of which must be in general psychology and the remainder in other suitable psychology courses.

Maine is making plans for area certification in 1952 and will then require a major or minor in psychology in order for one to be able to teach this subject.

In Arkansas there are specific certification requirements but under present circumstances they do not apply to the teaching of psychology because a teacher is permitted to teach a minor fraction of the school day in a noncertified subject field. In no instance does a high school have more than one class in psychology during any school year.

In North Dakota teachers are supposed to have a minimum of 15 hours of preparation, but probably not all of those teaching psychology can meet this minimum qualification.

Washington and Colorado do not have subject certification, but accreditation standards require that teachers have 15 and 18 quarter-hours of training respectively.

In some states there are only blanket licenses entitling one to teach any subject at the high school level. Some officials pointed out that a minimum of three semester-hours training in psychology is required for such a general license.

Something further of the qualifications of teachers was learned from the questionnaire sent to teachers. Of the 147 teachers answering the questionnaire, 127 gave usable responses concerning their training. High school teachers of psychology are trained primarily in social sciences and education, the mean numbers of semester-hours reported being 27.14 and 24.64 respectively. These figures include both undergraduate and graduate training but do not include courses in educational psychology. If one combines training in educational psychology and psychology, the mean numbers of semester-hours training in psychology are as follows: undergraduate 11.95, graduate 6.54, both 18.49. On the other hand, if one considers only training in psychology (not including educational psychology), there is the disturbing fact that teachers report mean semester-hours of training as follows: undergraduate 5.71, graduate 2.55, both 8.26. Expressed in another way, 79.5 per cent of the teachers reported having had ten or fewer semester-hours undergraduate training in psychology and 89.8 per cent reported having had ten or fewer hours graduate training in psychology. Of the 127 teachers reporting, 37.8 per cent indicated no undergraduate and 77.2 per cent indicated no gradu-

ate training in psychology, that is, as distinguished from educational psychology.

Teachers were asked to indicate the subject areas in which they taught in addition to their teaching of psychology. Eleven of the 142 teachers answering this question taught no courses other than psychology, but they did have administrative duties. Apparently no teachers devote full time to the teaching of psychology. Of 131 teachers indicating that they taught in one or more areas other than psychology, 48.9 per cent taught in the area of social science, but apparently a high school teacher of psychology may be asked to combine his teaching in this field with almost any other subject in the curriculum.

On the questionnaire teachers were asked to indicate school work of a psychological nature which they did in addition to their teaching of psychology (other than such work with the pupils in their own classes). No further attempt was made to define psychological work, but 53.5 per cent of the teachers indicated that they did some additional school work which they considered to be of a psychological nature. Such work was generally indicated as that of superintendent, principal, director of guidance, or counselor.

Further details on the training and experience of teachers are reported elsewhere (8).

AREAS OTHER THAN A COURSE IN PSYCHOLOGY IN WHICH PSYCHOLOGICAL MATERIAL IS PRESENTED

In all states in which officials indicated that psychology is not taught as a separate subject of instruction, they did indicate that psychological material is presented in connection with other courses. The most frequently mentioned areas in which psychological material is taught are as follows (in descending order of frequency of mention):

- Home economics, homemaking, family relations;
- Social studies, social problems, human relations, sociology;
- American government, American problems, problems of democracy, civics, citizenship;
- Health and physical education;
- Life-adjustment, boy-girl relationships, personal development.

Other subject fields less frequently mentioned as offering psychological material were biology, commercial, vocational, and general science. Orientation and guidance programs seem to account for a very considerable amount of instruction which is psychological in nature.

REASONS FOR NOT OFFERING A COURSE IN PSYCHOLOGY

State officials were asked to express their opinions as to why psychology was not taught as a separate subject in any, or in relatively few high schools in their states. Inertia and lack of interest were frankly given as reasons for not teaching psychology. Some pointed out that many high schools are small and teachers have a full load with the already crowded curriculum. Others indicated that frequently there is no adequately trained and otherwise qualified teacher available for a course in psychology.

Psychology is frequently thought of as a college-type subject and so too difficult for high school pupils, especially if taught by college methods. There seemed to be some fear that psychology would be taught as "pure" psychology, several officials expressing the opinion that psychological material could be and is taught more effectively when applied in courses other than those under the title "Psychology."

The present increasing emphasis on a core curriculum as contrasted with the traditional subject-matter curriculum is not conducive to the introduction of separate courses in psychology.

One official expressed the opinion that one reason for psychology not being taught in his state was fear of controversial possibilities. Another said, "Psychological material can be presented under several names, such as marital relationships, etc., without repercussion. The mention, however, of psychology appears to include a fear which, although unfounded, is very real."

CONCLUSION

Relatively few high schools offer a course in psychology, but the number seems to be increasing. In those schools in which it is offered, both teachers and pupils tend to be enthusiastic about the course. They believe that it contributes more to meeting objectives of secondary education than do most courses, and they tend to believe that more than one semester should be devoted to the course in psychology.

High school courses tend to be of an applied nature, that is, mental hygiene, interpersonal relationships, social problems, and so forth. This fact raises many problems brought out by the APA ethics committee on the teaching of psychology, as well as problems of the content of the introductory course in psychology.

Although the training and experience of teachers of high school psychology varies greatly, there is a tendency for the teachers to be trained and experienced in social science and education rather than in psychology. The APA is concerned about college teaching and training at both the graduate and undergraduate levels, but the Association should not lose sight of the fact that many students have their first contact with psychology at an earlier age. High school teachers of psychology should have an opportunity for effective training. Many college courses with their emphases on theoretical problems and experimental techniques scarcely seem suitable for the training of teachers whose interests and needs are centered primarily in problems related to the personal and social adjustments of adolescents.

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 Muhyi, Ibrahim Abdullah
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 the Cross
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 Rabourn, Robert Eugene
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 Rainwater, Percy Lee
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 Rapaport, Irene N.
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 Rauch, Mary Darby
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 Regan, James Joseph
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 Reid, Roger Huffman
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 Reitzell, Jeanne Mannheim
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 Riley, Lawrence Paul
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 Robinson, James McKinley,
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 Robinson, Jane Holliday
 Rocchio, Patrick Dominic
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 August
 Rogers, Charles Morey
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Thompson, Pauline E.
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Tracktir, Jack
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| Wintill, Marilyn Ruth | Wright, Glenn Edward | Roberto A. | Zwetschke, Earl Theodore |
| Wirls, Charles Joseph | Wurtz, Robert E. | Zbranek, Anthony Dvorak | |

Language Requirements are Sham Requirements

To the Editor:

My experiences at several American universities have shown me that language requirements are sham requirements. Students fulfill them and don't know the language. If that's going to be the general trend, we may as well do away with these requirements. Such a policy would probably not do much harm to students of, say, the natural sciences.

In psychology it is different. I maintain that the best training in projecting oneself into the subjective word of other people consists in learning to master their languages and to be able to think in their ways. With respect to this exceedingly important goal practically nothing is accomplished by our present "foreign language requirement." I suggest that we make it a very serious "must" for psychologists to be in command of at least one foreign language. As a nation which is summoned to provide enlightened leadership in many parts of the world we may ask ourselves whether it is not essential that our technicians, economic advisers, and other experts understand the people they are working with in an immediate manner.

P. R. HOFSTAETTER

The Catholic University of America

The Alta Institute

Although there has been much discussion concerning regional problems in clinical psychology, the problems of a specific region have rarely been viewed except through a telescope from a distant center of psychological activity. If the telescope were powerful enough, it would perhaps be agreed among the observers that "they have problems out that-a-way" and further that the hinterland needed help. But regional difficulties have remained in the realm of subject matter which should be discussed occasionally because regional problems exist. To be completely fair, we must add that country cousins have been invited to solve their problems by joining large centers or organizations.

It occurred to some of us in the intermountain region, that rather than being looked at from afar, it might be well to look at ourselves. When we did, we got this picture. The geography of the region (roughly the area from Colorado to California) imposed cultural and educational isolation upon its clinical psychologists. They seemed to be restricted to the narrow confines of specific job requirements. The amount of correspondence between psychologists in the area might have been greater if we still had to depend upon the Pony Express

to carry our mail. Although we have modern means of communication, some clinical psychologists, living and working in the same city, had never met or talked with each other. If there were any research interests or endeavors in the area, they were being kept secret. Although we have many good colleges and universities, a working relationship between teaching institutions and service organizations was practically nonexistent. Furthermore, there appeared to be little awareness of the function of clinical psychology as a community service.

It was readily apparent that barriers to communication needed to be broken down. Professional isolation, on both a local and national level, had to be reduced. A simple solution occurred to us. We would gather together the clinical psychologists of the region to discuss—or perhaps discover—our common problems. To prevent the development of provincialism, frequently fostered by regional gatherings, we would bring to the mountains representatives from the national centers of clinical psychology.

Our enthusiasm was dampened somewhat by the sudden realization that fulfillment of the proposed simple solution would be expensive. With the undaunted courage of the naïve, we appealed to the United States Public Health Service for support. It was given, in the form of a grant to the Department of Psychiatry (Division of Clinical Psychology) of the University of Utah Medical School, and approval was given for a Clinical Psychology Institute to be held at Alta, Utah, during the week of June 25–29, 1951.

Under the direction of Dr. Ija N. Korner, a faculty was assembled and a program developed. Our visiting faculty reached from coast to coast, with Drs. Roy Schafer from the east, David Shakow from the midwest and Max Levin from the far west. Ija N. Korner and William H. Brown, both of the Department of Psychiatry, University of Utah School of Medicine, were the local staff members in Psychology. Dr. Leonard H. Taboroff, Director of the Utah Child Guidance Center, represented psychiatry on the institute team. An ardent critic of clinical psychology, Dr. Duane Bown, Associate Professor of Psychology, University of Utah, was selected to conduct the necessary research for an objective evaluation of the institute proceedings. Dr. Norman Anderson, a psychoanalyst in the University of Utah Department of Psychiatry, joined the faculty on psychotherapy day with a specific point of view. Dr. Eugene L. Bliss, a research-minded psychiatrist in the same department, participated in the psychology-psychiatry discussions.

The institute program, designed to stimulate a maximum degree of group participation evolving from brief

didactic presentations by the faculty, centered about the following five areas: (a) status of clinical psychology as a profession; (b) psychology and psychiatry; (c) diagnostic testing; (d) psychotherapy and the psychologist; (e) research (interest, techniques, problems).

The student group was composed of 25 clinical psychologists, from Montana, Idaho, Colorado, and Utah. (We received replies from about 25 additional clinical psychologists who were enthusiastic over the institute plans but who were unable to attend because of other commitments. Many hoped that a future institute would not conflict with their summer school teaching. Although we could have accepted a few more students, budget limitations made it necessary to keep the group small.) Length of experience and education ranged from beginning Master's to seasoned, supervisory-level PhD's. In order to promote participation by each individual, three small groups were formed. A brief review of the schedule will show the nature and function of the groups:

The first day started with a welcoming address, distribution of name cards (with first names emphasized), and announcing of the groups. Following a talk on the status of clinical psychology and the clinical psychologist's self-awareness, the group discussed questions raised. The students were then asked to write (anonymously) their impressions of the morning session. Following lunch, the small groups met with their permanent leaders (Korner, Levin, and Brown) for a more intimate discussion of the issues. After an hour, the alternate group leaders (Shakow, Schafer, and Taboroff) joined the small groups on a rotating basis. At the end of the day, the small groups (without the leaders) prepared a summary and evaluation of the day's proceedings. These were read to the entire group before the start of the next day's program. Although this basic schedule was followed throughout the week, great flexibility was allowed in order to meet the needs of the students. Because of a demand for more material of immediate and practicable usefulness, Schafer kept the whole group for an entire day on diagnostic testing. Other schedule revisions were made for Shakow and Levin on the topics of psychotherapy and research, respectively.

Alta, world-famed as a ski resort, becomes an isolated retreat when the snow is gone. The site was selected purposely for the freedom from distraction it provided. For five days students and faculty lived together; we wonder, but perhaps will never know, whether some of the most important gains of the institute took place around the dinner table, on walks, or in the evening "bull sessions." We are certain that it was this living experience which established a common ground, eased communication barriers, and provided a degree of "regional" security. Perhaps some

national security was gained as well. For example, on Monday, Dr. Shakow was Dr. Shakow to everyone; by Friday he was Dave to the students who earlier in the week wanted to bow in his presence.

The students wrote a long evaluation of the institute. Here we can give only a few excerpts. They would have liked more from the faculty, "the sort of thing we got from Roy; that was in terms of our immediate needs." "The group as a whole felt that they experienced growth and broadening, resulting particularly from experiences in the small group sessions."

Dr. Shakow's remarks on the institute reflect the general feeling of the faculty: "I've learned a great deal about things that I had just talked about or heard talked about. In most areas contacts are provided all the time because units are very large or because you have close neighbors. I've gained a respect for another aspect of clinical psychology and for the people who are placed in relatively difficult positions where they continue to show real interest, a wish for improvement, and so much modesty about their accomplishments."

IJA N. KORNER and WILLIAM H. BROWN
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Psychology in American Secondary Schools in the '90's

Psychology, as is well known, has been one of the latest sciences to develop in general and, in particular, in the United States. Some of us actually knew the first professors of psychology in American universities. William James' classical textbook was not published until 1890, and many of the younger generation are under the impression that prior to then, no courses in psychology were given in this country. The average psychologist even, in this country, is unaware of the fact that far from William James' *Principles* being the first American textbook in this field, it is, in point of number, most likely the fiftieth, and that most of them appeared between 1813 and 1886. Indeed, John Dewey, who is still, fortunately, with us, had written his manual in psychology before James' classic appeared in book form in 1890.

Of these more than two score textbooks (I am not referring to treatises like that of Jonathan Edwards and others on the Will) Upham's two-volume work, *Elements of Mental Philosophy*, published in 1831, passed through several editions, and was reprinted as late as 1886, only four years before the *Principles* of James appeared. At least a few other textbooks like Asa Mahan's, Joseph Haven's, Mark Hopkins' and Noah Porter's massive *Human Intellect* (in content about as large as James' two-volume work) also enjoyed a vast popularity. While it is true that most of these compendia were labeled "intellectual philosophy" or "men-

tal philosophy," Rauch's *Psychology* saw the light of day in 1840, only to be followed by Schmucker's *Psychology* in 1842, while in 1848 Hickok brought out his *Rational Psychology*, and in 1854 his *Empirical Psychology*, both of which saw more than one edition. Even the title of James' monumental work was not new, as it had its predecessor as well as its successor.

Even less known is it that many of the academies, collegiate institutes, normal schools, and other secondary schools in the United States prior to our century offered courses in psychology, and used a variety of textbooks. A conservative estimate of the number of copies of such books sold in the United States in the half century between 1831 and 1881 would be over half a million. It is my recollection reading somewhere that of one title alone, around a century ago, 130,000 copies were sold over a period of forty years.

The present writer, until recently, had no idea that psychology was in vogue in the secondary schools during the past century and it was therefore a surprise to him to come upon an examination paper in the library of William James which proved that psychology enjoyed a status in lesser institutions than colleges even in the '90's.

Since the handwriting somewhat resembled that of William James, I at first thought that the examiner *was* James, who might have, in addition to his courses at the Harvard Medical School, been prevailed on to teach psychology at Thayer Academy, Braintree, which was founded by General J. Thayer, "father of West Point," and is still one of the finest preparatory schools in New England. However, my inquiry brought the following reply from the retiring Principal, Dr. Stacy B. Southworth, who had been head of the School for over three decades.

You said in your letter that you had found among your archives an examination paper on *Mental Physiology* given on September 23, 1894, and you have requested information as to the person who was in charge of the course at the time.

I have found on investigation that the course was given, according to the catalogue, by Professor Jotham B. Sewall, who was then Headmaster of Thayer Academy. The textbook used at that time was Carpenter's *Mental Physiology*.

It was not my pleasure to know Professor J. B. Sewall, but from all reports he was a venerable white-haired gentleman of the old school who for a number of years was a professor at Bowdoin College. The course in *Mental Physiology* was discontinued at Thayer Academy when Professor Sewall's successor, Dr. William Gallagher, assumed the headmastership in September, 1896. I am sorry that my information cannot be more comprehensive.

When we consider that at this time whatever psychology was taught in the colleges was along the lines of the Scotch School (Reid, Brown, McCosh, etc.) and

labeled mental philosophy, it was a bold step to take for a headmaster of a coeducational institution of adolescents to use Carpenter's *Mental Physiology* as a textbook for a course similarly designated. Equally interesting, however, are the questions which the students of the preparatory school were expected to answer nearly sixty years ago.

Thayer Academy

Senior Class Examination

Mental Physiology—Dec. 14, 1894.

1. Distinguish the apparatus of animal life and the apparatus of organic life.
2. Give a general account of the nervous system—cerebro-spinal—in man, and describe a nerve fibre and ganglionic centre.
3. Illustrate what reflex and automatic actions are by the ascidian mollusk—also by the frog.
4. Define instinct and illustrate. Show how it may be modified by intelligence.

A. A. ROBACK
Emerson College

Qualifications to Practice Psychotherapy

To the Editor:

The time has come when psychologists have to pay closer attention to the qualifications of the members of their profession who meet the public in the practice of psychotherapy. The future of psychology is intimately related to the resolution of this problem. The current influx of "businessmen" who hunger for the quick dollar has hastened the necessity for an early solution.

I would like to suggest that no psychologist be permitted to engage in the unsupervised practice of psychotherapy until he has secured his PhD degree, or else face punitive action by the APA (perhaps ousting). I would further suggest that the granting of the PhD does not magically endow the psychologist with therapeutic powers. It would be necessary, it seems to me, that he have had a supervised year of accredited university or comparable training in psychotherapy before he can enter unsupervised practice. Ideally, it seems to me, the diploma in clinical psychology awarded by ABEPP should be required in addition, but this appears too Utopian at the moment.

These seem like drastic measures, considering the current practices of many individuals, but judging from some situations of which I am personally aware drastic measures will be required. It is not too early to think of the menace unqualified individuals in this area constitute to the future of our profession.

BENJAMIN MEHLMAN
Toledo State Hospital

Across the Secretary's Desk

New Associates

The Membership Committee met in Washington on November 17 and 18 and, with the assistance of the Central Office staff, examined 1,612 applications for Associate membership in the APA. After two days of intensive work, the Committee had agreed to recommend to the Board of Directors that 1,399 of the applicants be elected. (A number of applicants had to be placed in an "uncertain" category, pending the collection of additional information. Some of these applicants have subsequently been elected.) The Board of Directors has followed the Committee's recommendations and the Central Office has now mailed out 1,417 new certificates of Associate membership.

If all these new members pay their initial dues, the circulation of the *American Psychologist*, of the *Psychological Abstracts* and of the *Psychological Bulletin* will all be increased by 1,417, sending the circulation of each above the 13,000 mark. A small proportion of these new members (probably around 5 or 10 per cent) will subscribe to one or more of the other APA journals. There will be an additional 1,417 potential attendants at the annual meeting, 1,417 more potential readers of papers, 1,417 more potential registrants in the APA Placement System. There will be 1,417 additional dues bills and subscription records to be handled by the Central Office. There will be 1,417 additional participants in the future of American psychology.

We now have a membership of 10,000 Fellows and Associates, an increase of 16 per cent over 1951. Our growth curve maintains for another year the slope it has had since 1892. We are still headed toward an extrapolated total of 60,000,000 psychologists in the year 2050. How long our growth will continue at this vine-like rate is very uncertain, for the number of psychologists even the nurturant American society will support is not infinite and neither is the supply of bright young people who can enter the field. The rate of growth is almost sure to continue through the next two or three years, however, for we still continue to admit around 3,000 students a year into our graduate departments of psychology and at the moment there are upwards of 6,000 graduate students enrolled in 144 graduate departments. (Report of the Com-

mittee on Training in Clinical Psychology, *American Psychologist*, November 1951.) Barring some major social upheaval, we can plan on a membership of 11,500 by 1953, and of 13,000 or more in 1954.

We have made no detailed analysis of the characteristics and qualifications of these new members but at a level of impression, the statistical facts about these 1,417 new members are very similar to those about last year's 1,360. (Across the Secretary's Desk, December 1950.) It is very clear that in over-all constitution the APA continues to have relatively more young Associates and relatively fewer older Fellows.

Technical Aide to State Psychological Associations

On December 15, 1951 Jane Hildreth was assigned to serve half time as Technical Aide to the Conference of State Psychological Associations. The establishment and staffing of this new billet in the Central Office is the outgrowth of a recognition on the part of the Conference and the APA Board of Directors that state associations have become very important entities and probably will assume an increasingly significant role in American psychology.

The Executive Committee of the Conference of State Psychological Associations has given Mrs. Hildreth general guidance concerning the nature of her job, and there will be a gradual structuring of detailed functions as the needs of state associations become clearer.

Few psychologists who have been connected with or concerned about state association affairs will doubt the increasing importance of state associations or the potential usefulness of a Central Office Technical Aide. Many will regard it as both inevitable and desirable that such problems as legislation and ethics will be handled at the state level. Others see the probability, with the increased growth of APA membership, that meetings of state associations will eventually replace the APA annual meeting as a medium of scientific communication. The appointment of a Central staff person may—and probably should—turn out to be an adaptive if

apparently paradoxical step toward decentralization.

Public Relations

George Albee, Assistant Executive Secretary, has replaced Mrs. Hildreth as APA Public Information Officer. Dr. Albee will continue to administer the bustling Placement Service and will continue to be generally indispensable around the Central Office while working in this new capacity.

For some time now we here in the Central Office have had a resolve to move, in our Public Information function, toward a more active and creative program. Our public relations activities in the past have been relatively passive and *ex post facto*. The Central Office has had an informal directive, born of psychologists' inhibitions about publicity, to keep public relations perfectly safe. This means that the Public Information Officer has answered questions when asked and has taken steps to correct mistaken perceptions of psychology and psychologists—most often after these misperceptions were preserved in print. Recently many members have felt that we should become less inhibited, less neurotically careful, more active in giving the public accurate information about what psychology is and what psychologists do.

People are interested in psychology. Psychologists, in going about their proper business, do newsworthy things. A democratic public deserves—perhaps needs—accurate information about psychology. Particularly is this true when so many annual millions from public funds are pouring into psychological research and development. The American public gives substantial support to psychology. The public has accepted *its version* of psychology as an integral part of our intellectual climate. The support for psychology may not increase in magnitude if the public perception of psychology is increased in accuracy, but the support will increase in general healthiness. If our bargain with society is more clearly seen by both participants, we can go about our business without the fear that either we or our offerings are being subject to distorted and distorting attitudes of expectancy. And the public in seeking psychological research or services will not expect miracles where none can happen, will not confuse quacks with competent professionals, will neither reject psychology out of unfounded fear nor accept it too enthusiastically out of uninformed gullibility.

It will continue to be true that psychologists will hit the headlines most dramatically when they, like ordinary mortals, have emotional difficulties or marital problems or when their behavior runs excitingly counter to conventional norms of propriety. Those who are perceived as accepting responsibility for the welfare of others are the targets for considerable hostility and ridicule when they depart from the narrow path.

It will also continue to be true that many of the constructive day-to-day doings of psychologists are not newsworthy. Only the very dramatic events in our field will receive lay attention—particularly if we passively wait for the layman to seek out his own news.

Few members of the Association would support an APA program of propaganda. Many members will support reasonable and responsible attempts to meet the public half way in its interest in psychology. After all, the conduct of a public information program is not much different, morally or technically, from teaching an undergraduate class. As the class becomes larger, the job of teaching becomes more intricate, demanding much more in the way of communicative skill. But however large the class, it is at least theoretically possible to communicate to it in ways that are (a) in line with scientific accuracy, (b) in the public interest, and (c) effective.

The Central Office will explore ways in which psychologists can, in good conscience, engage in public information activities. Perhaps we here will try our hands at the actual writing of news releases about scientific articles appearing in our journals or about professional developments in our field. Perhaps we will find specific ways of helping local psychological groups in their attempts to educate either the general public or specific segments thereof. We can work, and with a right good will, to give an interested public an accurate perception of psychology. If psychologists do not work toward such a goal, non-psychologists will. If the psychologist is interested in public information, all he needs in order to swing into action is a conviction that he can do better than the non-psychologist in giving the public an accurate and complete picture of psychology.

Dr. Albee, working in conjunction with the APA Committee on Public Relations, will be in charge of Central Office activities in this area. He has already begun an active exploration into

the technical, social, and linguistic problems involved in transmitting psychological information to the public.

An APA Building

Under instructions from the Board of Directors and the Council of Representatives to search for a building that might be purchased by APA, the Building Committee has by now inspected, with varying degrees of thoroughness, approximately 50 properties in Washington. These have varied in asking price from \$45,000 to \$350,000, in location from very "proper" neighborhoods to areas now on the downgrade, in appearance from stately ugliness to sedate beauty. Six of these properties, with the assistance of a real estate consultant and an architect, have been reported in detail to the Board of Directors.

So far, the APA has scored three near misses in the attempt to secure a suitable building. We are now working up again to either (a) the actual purchase of a building or (b) another near miss. At one time arrangements were all made with the owner of a building the Board of Directors judged suitable, but the District of Columbia Board of Zoning Adjustment denied us permission to occupy the property. It is located in a residential area and the local authorities declared their intent of

keeping it residential. Twice the Board has voted to purchase another property judged suitable for APA use, but the owner has refused to sell at a price the Board and our experts thought to be equitable.

We now again have reached a stage of active negotiation for a building. If these negotiations are consummated, and if the zoning authorities allow our occupancy, the APA will own a handsome and eminently useful building in an excellent Washington neighborhood. It will cost upward of \$200,000 but will not only give us first-class space for an expanded Central Office staff but will also yield good income from the leasing of space which we do not immediately need. It is a relatively modern building in excellent repair. It will give the APA the sort of housing that many feel to be appropriate for our large and significant organization. Many members, judging by the glint in the eyes of those who have seen the property, will experience a considerable pride of ownership. If the deal is consummated, we will be able in April or May to publish a detailed description and picture of the property, and will be able to move into the building before the 1952 annual meeting. If the deal falls through or if the zoning authorities are again against our occupancy, we will start all over again.

FILLMORE H. SANFORD



PAUL HORST

Professor, Department of Psychology, University of Washington
Policy and Planning Board, American Psychological Association

Psychological Notes and News

Norman MacNaughton died on July 12, 1951.

Milo R. Stevens, assistant professor of psychology at the University of Toledo, died on December 14, 1951 at the age of thirty-eight.

Norman M. Grier died on December 26, 1951.

John T. Gobey died on December 31, 1952 at Monterey, California after an illness of about one year.

Henry C. Link, vice-president of the Psychological Corporation, died on January 9 at the age of sixty-two.

The American Board of Examiners in Professional Psychology, Inc. announces herewith the award of its diploma to another 43 psychologists in the indicated professional specialties. This group includes 34 members of the American Psychological Association and nine members of the Canadian Psychological Association. This is the first announcement of awards to psychologists who have applied through the Canadian Psychological Association.

In seven previous issues of the *American Psychologist* (Vol. 3, No. 5, May 1948; Vol. 3, No. 8, August 1948; Vol. 4, No. 6, June 1949; Vol. 4, No. 8, August 1949; Vol. 5, No. 6, June 1950; Vol. 5, No. 11, November 1950; Vol. 6, No. 8, August 1951), the Board has announced the award of its diploma to 993 members of the American Psychological Association. These eight announcements represent the award of 1,035 diplomas to senior members in professional fields of psychology on the basis of a review of individual qualifications and without written and oral examination.

The award of diplomas to 28 candidates who have qualified for the diploma by satisfactory performance on written and oral examination has been separately announced in the *American Psychologist* (Vol. 6, No. 3, March 1951; Vol. 6, No. 8, August 1951).

To date, a total of 1,064 diplomas have been awarded by the Board.

In the following list an asterisk is used to indicate awards made to psychologists applying through

the Canadian Psychological Association. These awards are the first made to this group of psychologists.

CLINICAL

Baugh, Verner S.	Hertzman, Max
Bernfeld, Siegfried	Howard, James W.*
Bone, Harry	Jacobsen, Marion M.
Brick, Maria	Kennelly, Thomas W.
Brown, A. Jean *	Kris, Ernst
Brown, William H.	Laycock, Samuel R.*
Devening, Jean M.	Reik, Theodor
Eitzen, David	Remple, Henry D.
Fromm, Erich	Shevenell, Raymond H.*
Gassert, M. Elizabeth	Simon, Clarence T.
Guanella, Frances M.	Thorn, Katherine F.
Harris, Dale B.	Wertman, Hazel E.
Henley, Eugene H.	Zizmor, Jesse
Herma, John L.	

COUNSELING AND GUIDANCE

Barringer, Benton E.	Parmenter, Morgan D.*
Boland, Ruth F.	Ricciuti, Edward A.
Bregman, Elsie O.	Scott, Winifred S.
Cosgrave, Gerald P.*	Sherman, Dorothy M.
Forlano, George	Switzer, St. Clair A.
Johnson, Louise S.	Wallar, Gene A.

INDUSTRIAL

Boyd, John B.*	Hewson, John C.*
Guilford, J. P.	Wees, W. R.*

Aaron B. Nadel, who has been deputy executive director of the Committee on Human Resources, Research and Development Board, and acting executive director since September 1, 1951, has been appointed executive director of the Committee to succeed Dwight W. Chapman, Jr., who is now at the University of Michigan as professor of social psychology.

John T. Wilson has joined the staff of the Division of Biological Sciences, National Science Foundation. He was formerly head of the Personnel and Training Branch of the Human Resources Division, Office of Naval Research.

Dr. H. Michal-Smith has resigned his position as chief clinical psychologist, New Jersey State Di-

agnostic Center, Menlo Park, N. J., in order to assume the position of research associate in pediatrics, New York Medical College and chief clinical psychologist, Flower and Fifth Avenue Hospitals, New York City.

Harry Laurent has recently resigned as assistant director of the Personnel Research Institute of Western Reserve University to accept a position with the Arabian American Oil Company, 505 Park Avenue, New York, N. Y. He begins his new duties in January.

Jack Elinson has resigned from the Attitude Research Branch in the Department of Defense to accept the position of senior study director with the National Opinion Research Center of the University of Chicago.

James E. Simpson, formerly assistant professor at Fresno State College, is now the clinical psychologist at the Boys Industrial School, Topeka, Kansas.

Charles Roth has been granted a leave of absence from the Division of Testing and Guidance of the City College of New York and has returned to active duty in the Armed Forces. He is now teaching at the U. S. Military Academy, West Point, N. Y. During 1952 he will be replaced at City College by **Abraham B. Brody** who has been a clinical psychologist in the Mental Hygiene Unit of the New York Regional Office of Veterans Administration.

Ira Iscoe has been appointed assistant professor at the University of Texas. He was formerly at the University of California at Los Angeles.

Leonard W. Ferguson is now with the Aetna Life Affiliated Companies in Hartford, Connecticut. He was formerly with the Metropolitan Life Insurance Company.

John A. Blake was appointed in September as chief clinical psychologist at Central State Hospital, Petersburg, Virginia, and he continues to teach on a part-time basis on the staff of the Richmond Area University Center. He was formerly assistant professor in the Richmond Division of the College of William and Mary.

Rita T. Forte has resigned her position as psychologist of the Bureau of Child Guidance of New

York to accept an appointment as psychologist by the National Institute of Mental Health, U. S. Public Health Service, assigned to the Juvenile Court of the District of Columbia.

Frank Cassens is now personnel research coordinator for the Lago and Transport Company, Ltd. in Aruba, Netherlands West Indies. He was formerly testing coordinator with the same company.

Robert A. Harris, formerly at Vassar College, has been appointed to a postdoctoral fellowship on a grant from the National Institute of Mental Health to the associated psychology faculties of the University of Chicago, Northwestern University, University of Illinois School of Medicine, and Michael Reese Hospital. His station is at the Institute for Psychosomatic and Psychiatric Research and Training, Michael Reese Hospital, Chicago.

Roger T. Davis, of the psychology staff at the University of South Dakota, has been awarded a research grant from the National Institutes of Health to study radiation effects on primates. He will investigate the effects of lethal and sub-lethal dosages of X-radiation on learning and other behavioral aspects of macaques.

Henry A. Imus, head of the Psychophysiology Branch, Biological Sciences Division, Office of Naval Research and now on assignment to the London Branch Office of Naval Research, has recently been elected to membership in the Ergonomics Society and in the British Psychological Society.

The APA Public Relations Committee is interested in learning of all research, published and unpublished, which bears on psychology's relationship with the public or other groups. Studies of psychology's reputation, the kind of psychological reading available to the public, library usage of psychological materials, etc., are appropriate. Please communicate with Donald T. Campbell, Department of Psychology, University of Chicago, Chicago 37, Illinois.

The Division of Maturity and Old Age, at its September, 1951 meeting, authorized the establishment of a *Newsletter*. The first issue of the publication will appear in February, 1952. Oscar J. Kaplan has been named editor and James E. Birren will serve as associate editor. News items should

be sent to the editor, San Diego State College, San Diego 15, California.

The Education and Training Board of the APA will hold a midyear conference at the University of Michigan on February 21-24. All committees of the Board will meet for the first two days, with the remainder of the time being devoted to general sessions aimed at clarifying basic issues in the education of American psychologists.

Membership applications for the Division of Clinical and Abnormal Psychology must be filed not later than *February 15, 1952* to be considered for the coming year. Application blanks should be sent to the office of the secretary-treasurer, Dr. Ann Magaret, 5728 S. Ellis Ave., Chicago 37, Illinois.

The New York State Psychological Association announces that an Advisory Committee made up of its members has been established to work with the New York State Employment Service. The New York State Employment Service is prepared to refer well-qualified psychologists to employers located anywhere within the United States. There is no fee for this service. Employers are invited to list any openings for psychologists with the New York State Employment Service. All correspondence should be directed to The Professional Office of the New York State Employment Service, 1 East 19th St., New York 3, N. Y.

Psychology in the World Emergency will be the subject of the sixth annual Conference on Current Trends in Psychology to be held at the University of Pittsburgh on February 15 and 16, 1952. Members of the American Psychological Association may obtain tickets without charge by writing to the Department of Psychology, University of Pittsburgh, Pittsburgh 13, Pennsylvania.

The speakers and their prospective topics are as follows:

Donald E. Baier: Matching Personnel and Jobs.

Raymond V. Bowers (Frederick W. Williams co-author): Psychological Warfare, Strategic Intelligence, and Overseas Research in the World Emergency.

Fillmore H. Sanford: Research on Military Leadership.

Glen Finch: Organization and Opportunities in Service Programs of Psychological Research.

John L. Kennedy: The Uses and Limitations of Mathematical Models, Game Theory, and Systems Analysis in Planning and Problem Solving.

J. W. Macmillan: Problems in the Administration and Utilization of Contract Research Studies.

Arthur W. Melton: Military Requirements for Systematic Study of Psychological Variables.

The Survey Research Center of the University of Michigan will hold its Summer Institute in survey research techniques this summer for the fifth consecutive year. This special program is designed to illustrate the theory and application of survey research to such fields as psychology, sociology, public health, business and human relations, statistics, economics, etc. This year a special workshop will be offered in the practical application of survey research methods to these individual fields. The dates for this session are June 23 to July 18 and July 21 to August 15. For information, write to the Survey Research Center, University of Michigan, Ann Arbor, Michigan.

The Committee for the Scientific Study of Religion held its fall meeting at Harvard University on November 3, 1951. Research papers were presented at the afternoon session, and the meeting was concluded in the evening with a round-table discussion of approaches to the scientific study of religion from social anthropology, social psychology, clinical psychology, and sociology. Participating were Professors M. Opler of Stanford University, and G. W. Allport, R. McCann, and T. Parsons of Harvard University. The date for the spring meeting is set for April 26, 1952 at Harvard University. Qualified social scientists with empirical research who would like to apply for a place on the program should write immediately, giving a full description of their work, to the Chairman, Professor Talcott Parsons, Department of Social Relations, Harvard University, Cambridge 38, Mass. Prospective members should write Professor J. Paul Williams, Mt. Holyoke College, South Hadley, Massachusetts.

The Industrial Relations Research Award, a \$500 U. S. Government bond, will be presented by the Society for the Psychological Study of Social Issues to the individual whose research is judged most meritorious as a scientific contribution to the understanding of labor-management relations. This award has been made possible by a gift to the So-

ciety for the Psychological Study of Social Issues by the Harwood Manufacturing Corporation, through the offices of Dr. Alfred J. Marrow, President of the Harwood Corporation, and a member of SPSSI. Any research study completed during 1950, 1951, and 1952 will be eligible for consideration. Manuscripts reporting completed research, whether or not published, should be submitted as far in advance of the closing date, *July 1, 1952*, as is feasible. It is intended that this award should stimulate the development of new research approaches to the understanding of the social psychology of industrial relations and to the improvement of the relationships between labor and management. A committee of judges is being appointed by the executive council of SPSSI. Their names and further information about the conditions for making the award will be published later in the year. Inquiries concerning the award should be addressed to Mrs. Helen S. Service, Assistant Secretary, SPSSI, Department of Psychology, Columbia University, New York, N. Y.

At the first business meeting of the 1951-52 season of the **Harris County (Texas) Psychological Association** the following officers were elected: Trenton Wann, Rice Institute, president; Richard I. Evans, University of Houston, secretary-treasurer; Sidney Cleveland, Houston VA Hospital, and S. Thomas Friedman, Southwestern Jewish Relationships Council, members of the Executive Council.

A twenty-year study of patterns of vocational development is being launched in Middletown, New York, under the joint sponsorship of the Horace Mann-Lincoln Institute of School Experimentation and the Department of Guidance of Teachers College, Columbia University. The Career Pattern Study is making intensive case studies of three hundred 8th and 9th grade boys, who will be followed through school and into adulthood. At the same time, the Study is analyzing local occupational opportunities, trends, and attitudes. Its objective is to obtain a comprehensive picture of the factors affecting the vocational ambitions, choices, success, and adjustments of the boys being studied. The Study is directed by Donald E. Super; its staff includes Harry Beilin, Junius Davis, and Martin Hamburger as research assistants; Albert S. Thompson and Charles N. Morris as con-

sultants; and several graduate students as part-time assistants.

The Council of the American Psychiatric Association has recently passed a resolution favoring certification of clinical psychologists. The resolution stated:

The American Psychiatric Association recognizes that in recent years there have been wide developments in the field of psychology. The Association recognizes contributions to the diagnosis and treatment of psychiatric patients, which have come from psychology.

As a measure to protect the public from unqualified persons, an establishment of standards of competence in the psychological profession is regarded of great importance. The American Psychiatric Association fully supports the desirability of designating by legal certification those, who by education and experience, should have the privilege to be known as qualified psychologists.

The Association further recognizes that the work of the clinical psychologist occurs, in part, in the medical field. The Association recognizes that clinical psychologists also operate in other areas, such as vocational or educational guidance and remedial reading, which are, in general, not closely related to the practice of medicine.

The Association emphasizes that when clinical psychologists work with illness, whether such illness be manifested in physical or psychological symptoms or signs, it is essential that they work under the continuing direction of a licensed physician who is properly qualified to assume responsibility for the particular patient involved. In general, the physicians best qualified for this direction are psychiatrists.

At the present time, the Association believes that it is impossible to define and delimit the practice of psychology for purposes of licensure in a way not likely to be interpreted as permitting psychologists to assume responsibilities for which they are not qualified, such as the diagnosis and treatment of ill persons. Neither does the Association believe that it is possible to define the practice of psychology in a way not likely to be interpreted as unduly limiting other professional groups, such as lawyers, ministers, social workers and teachers, in the proper exercise of their professional activities. For these reasons the Association does not believe that the licensing of psychologists is consistent with sound public policy.

The Association, being aware of the importance of working toward better relations between psychiatry and psychology, urges its members to cooperate to bring about such advance. We recognize that the professional services of both psychologists and psychiatrists are made more effective when they function together to achieve a common purpose. It is particularly important that training programs in clinical psychology be strengthened, to enable psychologists to receive that type of training which can be given in medical settings, to bring about better coordination between these two professions.

The APA Advisory Editors to the *Journal of Educational Psychology* are: Stephen M. Corey (chairman), J. B. Stroud and Wm. Clark Trow.

The Inter-Society Color Council will hold its twenty-first annual meeting at the Hotel Statler in New York City on February 7-9, 1952. All members of the APA have been invited to attend.

The Berufsverband Deutscher Psychologen (Landesverband Bayern), the professional association of German psychologists, has elected a Committee for International Cooperation with Hans G. Pfaffenberger as chairman. The functions of the Committee have been loosely defined and will be formulated more precisely after the present exploratory stage. The general aim is the strengthening of cooperation and interaction of psychologists in Germany and abroad. Possible steps toward this aim may be illustrated by the following example: one German journal, on the suggestion of the Committee has offered space for review of American books and comprehensive summaries of research findings in the fields of juvenile delinquency, child guidance, group and individual therapy with children and adolescents, and similar topics. The Committee will be glad to offer its services for similar requests and suggestions by American psychologists, editors, and authors. Inquiries and requests should be addressed to the Committee for International Cooperation, c/o Hans G. Pfaffenberger, 29 Komotauerstr., Nurnberg, Germany.

Fulbright travel grants for lecturing and research in psychology in the United States have been awarded to the following foreign scholars: U Hla Bu, professor of philosophy and psychology at the University of Rangoon, for work at Harvard University; Alice W. Heim, investigator in applied psychology at Cambridge University, for work at Stanford University; Antoine Oldendorff, professor of sociology, Carolus Magnus University, Netherlands, for work at the University of Michigan; William M. O'Neil, McCaughey Professor of Psychology at the University of Sydney, for work at the University of Minnesota; Asenath Petrie, clinical and research psychologist, St. George's Hospital, London, for work at the University of Pennsylvania; and Walter Toman, assistant in the department of psychology at the University of Vienna, for work at Harvard University.

The grants have been made for various periods of time during the academic year 1951-1952. The APA has learned that many of these psychologists would appreciate invitations to attend professional meetings to be held during the coming year and would also like to visit institutions other than their host institutions. Invitations from other universities and colleges near the host institution would be especially appreciated.

The Board of Scientific Directors of the Roscoe B. Jackson Memorial Laboratory at Bar Harbor, Maine, has announced the appointment of an Advisory Committee of distinguished scientists whose duty it will be to consult concerning the program of research on the genetics of animal behavior being carried on at the Laboratory. Frank Beach will serve as Chairman. Members of the Committee are Leonard Carmichael, Howard S. Liddell, Donald O. Hebb, and Theodore C. Schneirla.

Dunlap and Associates, Inc., research psychologists and industrial consultants, conducted a seminar on October 18, 1951 on "The Human Factor in Industrial Inspection" at the firm's office at 429 Atlantic Street, Stamford, Conn., for a group of eight British industrialists who are visiting America under the sponsorship of the Anglo-American Commission on Productivity and the Technical Assistance Division of the Economic Cooperation Administration. Jack W. Dunlap, president of the concern, explained the nature of its psychological research work; J. D. Coakley delivered a paper on "Human Effect on Automatic Machines" and "Inspection as a Subsystem of the Over-all System"; R. C. Channell spoke on "Specifications of Inspection Standards" and Jesse Orlansky on "Effect of Training, Worker Morale and Environmental Conditions on Inspection Problems." The session concluded with a talk by Dr. Dunlap on "Statistics as a Criterion for Evaluating Inspection Methods."

A committee has been formed to plan for the organization of a Nassau County (New York) Psychological Association. The impetus to the organization was given by the Nassau County Mental Health Association which requested psychologists of the County to supply the Mental Health Association with a list of qualified psychological consultants. An organizing meeting was held at Adelphi College, Garden City, New York, in Room

108 of the Science Building, at 8 o'clock on December 17. Gordon F. Derner, director of clinical psychology at Adelphi College, is the pro tem chairman of the organizing committee.

Conscientious objectors are not wanted by the military services, but may find themselves in uniform or in jail if they are not informed about the procedure prescribed for them under the law. Organizations to which conscientious objectors may be referred are: National Service Board for Religious Objectors, 1000 Eleventh Street N. W., Washington, D. C.; Fellowship of Reconciliation, 21 Audubon Avenue, near 166th Street, New York City; Central Committee for Conscientious Objectors, 2006 Walnut Street, Philadelphia 3, Pennsylvania.

The Alcoholism Research Foundation, of the Province of Ontario, recently made a grant of \$25,000 to be divided between the departments of psychology, physiology, and biochemistry, Queen's University, Kingston, Ontario. The department of psychology will make a study in the Kingston Penitentiary on personality changes in alcoholics.

At its last annual meeting the APA Council of Representatives voted to take action regarding a book, *Common Human Needs*, by Charlotte Towle, which has been ordered destroyed by the Federal Security Administrator. The order by the Federal Security Administrator had been made because it was said that one sentence of the book appeared to advocate a socialistic form of government, though Miss Towle had indicated that this was not her intent and had offered to change the wording. The Council recommended that the American Association of Social Workers be urged to reproduce the book if they believed it useful in the training of social workers, and expressed a willingness to assist in any feasible way to make the book available again. (See *American Psychologist*, November 1951, p. 592.) The APA office has now received letters of thanks from Miss Towle and the American Association of Social Workers as well as the information that the book will be reprinted under the auspices of the American Association of Social Workers.

Vacancies

Graduate assistantships with The Reading Improvement Service leading to the Master's or Doc-

tor's degree at Western Reserve University. Open to men or women who are acceptable to the Graduate School of the University, the five assistantships each carry a stipend of \$800 for the first year and \$900 for the second year, with the privilege of carrying nine hours of graduate courses each semester with no tuition charges. BA degree in English, psychology, or education required. Work is with children, college students, business, and professional clients. Tutoring experience helpful. Apply to Dr. Mary C. Austin, Director, 2029 Adelbert Road, Cleveland 6, Ohio.

Postdoctoral residency in clinical psychology in a 700-bed neuropsychiatric hospital. Write to Dr. Paul Dingman, Brattleboro Retreat, Brattleboro, Vermont.

Clinical psychologist, either sex, beginning immediately. Two years' clinical experience, MA or equivalent, for diagnostic testing, research and therapy. Will be required to supervise interns closely. Salary, \$3,660-\$4,575. State Merit System. Apply to Michael H. P. Finn, Springfield State Hospital, Sykesville, Maryland.

Clinical psychologist, either sex, at least MA and two years of clinical experience, for diagnostic testing and some therapy. Appointment at Psychologist II or III rating under State Civil Service, depending upon qualifications. Salary, \$3,660-\$5,520. Apply to Dr. Harriett K. Beck, Director, Port Huron Child Guidance Clinic, 1020 Pine Grove Avenue, Port Huron, Michigan.

Clinical psychologist, male or female, preferably PhD. Duties involve teaching basic and practicum courses and possibly research. Salary, open. Apply to Department of Psychology, University of Wichita, Wichita, Kansas.

Psychologists interested in teaching positions at the Hebrew University in Jerusalem are advised to write to Dr. Gregory Razran, Chairman, Department of Psychology, Queens College, Flushing, New York. Dr. Razran will teach at the University's summer session, April-June, 1952.

Clinical child psychologist, half-time position open, other half-time to be in private practice. Half-time salary up to \$2,400. PhD preferred. Must be proficient in projective studies, especially Rorschach, with children, and have good grasp of psychoanalytic theory. Address application to Robert C. Murphy, Jr., M.D., Director, Tacoma-Pierce County Health Department, 2324 Pacific, Tacoma, Washington.

... for a modern
approach

PSYCHOLOGICAL THEORY: Contemporary Readings

- **Melvin H. Marx**

The most significant feature of this useful text is the collection in one place of a large number of important papers on problems of scientific theory construction otherwise available only in isolated and often difficult-to-obtain journals and books. The material in Part I is concerned with methodological problems and Part II contains selections from the writings of psychological theorists who have been most generally influential within the past two decades. 1951—\$5.00

THE DEVELOPMENT OF HUMAN BEHAVIOR

- **R. Dewey & W. J. Humber**

Dr. Norman A. Cameron, *University of Wisconsin* says about this new text: "The most immediately impressive thing is the originality of the organization. After the introductory chapters the authors go directly to the heart of the social process with the individual in it. The main structure of the book seems to me to follow the actual organization of human life, rather than to fragment it as so many works on social psychology and general psychology do. The prominence given to age groups reflects current trends; but it also preserves the integrity of the person in the center of things. The handling of abnormal status, deviant roles and personality is particularly skillful. It brings the varieties of deviants together in a manner that seems new to me, and certainly is illuminating. The style of writing is attractive, clear, and sequential—I mean by this that one tends to go on reading and gets into the next topic without being aware of an abrupt break." 1951—\$5.50

GUIDING LEARNING EXPERIENCE

- **Maud B. Muse**

Divided into four units, this book discusses first philosophies of education, then principles, followed by methods, and finally organization. The material presented is that which has been gathered and tested over many years by an authority in the fields of education, psychology and teaching practice. The book is exceptionally well-organized. 1950—\$4.50.

The Macmillan Company
New York

Convention Calendar

AMERICAN PSYCHOLOGICAL ASSOCIATION
September 1-6, 1952; Washington, D. C.

For information write to:

Dr. Fillmore H. Sanford
1515 Massachusetts Avenue N.W.
Washington 5, D. C.

EASTERN PSYCHOLOGICAL ASSOCIATION
March 28-29, 1952; Atlantic City, New Jersey

For information write to:

Dr. Charles N. Cofer
Department of Psychology
University of Maryland
College Park, Maryland

WESTERN PSYCHOLOGICAL ASSOCIATION
April 25-26, 1952; Fresno, California

For information write to:

Dr. Richard W. Kilby
Department of Psychology
San Jose State College
San Jose 14, California

MIDWESTERN PSYCHOLOGICAL ASSOCIATION
April 25-26, 1952; Cleveland, Ohio

For information write to:

Dr. David A. Grant
Department of Psychology
University of Wisconsin
Madison, Wisconsin

ONTARIO PSYCHOLOGICAL ASSOCIATION
February 1-2, 1952; Toronto, Ontario

For information write to:

Roy A. Ross
Department of Psychology
University of Toronto
Toronto 5, Ontario, Canada

Abnormal Psychology and Modern Life

is well balanced, stimulating, and practical. It is written in a clear, readable style that brings the subject matter vividly to life for a wide range of students. The material is reinforced with an extensive program of well developed case studies.

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by James C. Coleman, University of California at Los Angeles

668 pages

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PSYCHOLOGICAL MONOGRAPHS: GENERAL AND APPLIED

VOLUME 64, 1950

Patterns of Personality Rigidity and Some of Their Determinants. SEYMOUR FISHER. #307. \$1.00.

The Value of an Oral Reading Test for Diagnosis of the Reading Difficulties of College Freshmen of Low Academic Performance. CHARLES A. WELLS. #308. \$1.00.

Rorschach Responses Related to Vocational Interests and Job Satisfaction. SOLIS L. KATES. #309. \$1.00.

Symbol Elaboration Test (S.E.T.): The Reliability and Validity of a New Projective Technique. JOHANNA KROUT. #310. \$2.00.

Changes in Responses to the Minnesota Multiphasic Inventory Following Certain Therapies. WILLIAM SCHOFIELD. #311. \$1.00.

A Scale for Measuring Teacher-Pupil Attitudes and Teacher-Pupil Rapport. CARROLL H. LEEDS. #312. \$1.00.

The Nature and Efficacy of Methods of Attack on Reasoning Problems. BENJAMIN BURACK. #313. \$1.00.

The Validity of a Multiple-Choice Projective Test in Psychopathological Screening. MARTIN SINGER. #314. \$1.00.

A Normative Study of the Thematic Apperception Test. LEONARD D. ERON. #315. \$1.50.

Experimentally Induced Variations in Rorschach Performance. EDITH E. LORD. #316. \$1.00.

An Evaluation of Personality-Trait Ratings Obtained by Unstructured Assessment Interviews. ERNEST C. TUPES. #317. \$1.00.

Orders for any of these Monographs can be placed separately at the prices listed above, or the entire volume can be ordered for \$6.00.

AMERICAN PSYCHOLOGICAL ASSOCIATION
1515 MASSACHUSETTS AVENUE, N. W., WASHINGTON 5, D. C.

EARLY PUBLICATION

IN

APA JOURNALS

The policy of accepting articles for immediate publication (providing the editor accepts the article and the author is willing to pay the entire cost of increasing the next available issue by enough pages to add his article to the normal content) is now standard practice for all APA journals except *Psychological Abstracts* and the *American Psychologist*.

The actual charge made to the author includes three items:

1. A basic charge of so much per page. This is the minimum amount that it costs to add an additional page to the journal. For 1951 these costs are:

	PER PAGE
JOURNAL OF ABNORMAL AND SOCIAL PSYCHOLOGY	\$17.00
JOURNAL OF APPLIED PSYCHOLOGY	15.00
JOURNAL OF COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY..	11.00
JOURNAL OF CONSULTING PSYCHOLOGY	14.00
JOURNAL OF EXPERIMENTAL PSYCHOLOGY	14.00
PSYCHOLOGICAL BULLETIN	17.00
PSYCHOLOGICAL MONOGRAPHS: GENERAL AND APPLIED	15.00*
PSYCHOLOGICAL REVIEW	14.00

* Since each Psychological Monograph is printed separately, the author of one handled on an early publication basis can be charged exactly the cost of printing. The figure of \$15.00 is an approximate one; the actual figure will be higher for very short monographs and lower for very long ones. The cost will also vary depending upon the amount of special composition and the illustrations used.

These charges are based upon several factors:

- (a) The greater number of words on a particular journal page, the higher the cost per page. Conversely, the fewer words printed on the page, the lower the cost per page.
- (b) The more copies which must be printed, the higher the cost.
- (c) The more expensive the printer, the higher the cost. Compared to the factors listed above, this is not an important difference in the charges made.

2. The full cost of any cuts or other illustrative material, of special composition for tables, and of author's changes in proof.

3. The full cost of any reprints ordered. (Authors of early-publication articles do not receive any free reprints.)

CALL FOR PAPERS SIXTIETH ANNUAL CONVENTION OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

Washington, D. C., September 1-6, 1952

APA CONVENTION PROGRAM COMMITTEE

Howard F. Hunt, *Chairman*; Laurance F. Shaffer, *ex officio*; Launor F. Carter, Charles N. Cofer, Thelma Hunt, Sherman Ross, John W. Stafford

THE Convention Program Committee of the American Psychological Association announces a Call for Papers for the 1952 convention. No other call for papers will be distributed. General information about the convention, including hotel reservation forms, will be published in the April *American Psychologist* and the complete program will be published in the July *American Psychologist*.

I. TYPES OF SESSIONS COMPRISING THE 1952 CONVENTION

A. Individual Reports of Research. Four twelve-minute papers will be scheduled for each one-hour session. *Only reports of completed research* (data obtained, analysis completed) will be accepted. Members who wish to participate must submit abstracts of their papers to the appropriate divisional program chairman by March 22. The list of divisional program chairmen will be found on page 63 of this issue. The abstract of a given paper may be submitted to one division only. The regulations for abstracts are given on page 60.

B. Technical and Professional Problem Symposia. Emphasis should be placed upon specific problems rather than upon broad topics. The APA divisions are invited to propose and organize suitable two-hour symposia on technical or professional problems. Interdivision symposia are especially encouraged. The regulations for symposia are given on page 61.

C. Addresses: The APA President will present the annual address. Addresses by divisional presidents may be arranged for by each division. The APA President-elect will arrange for invited addresses by eminent speakers in related fields. Individual members may suggest topics and speakers for invited addresses to the appropriate divisional program committee.

D. Exhibits. Arrangements will be made for exhibits. Individual members are encouraged to exhibit apparatus, teaching aids, and other materials of scientific interests. Both commercial and private exhibitors wishing to make arrangements should write to the APA Central Office, 1515 Massachusetts Avenue N. W., Washington 5, D. C., indicating type of exhibit and approximate space needs.

E. Business Meetings. All groups desiring business meetings of divisions, boards, committees, etc., should make their needs known to the Chairman of the APA Program Committee. These should include a statement of estimated attendance, time required, and whether arrangements for luncheon and dinner are also desired. In the case of divisions, if the presidential address is to be given at the divisional business meeting, this fact should be included. The deadline for receipt of such communications is April 22.

F. Film Programs. Research and instructional films and film strips will be scheduled in special sessions to be arranged by the Audio-Visual Aids Committee, James J. Gibson, Chairman. See regulations on page 62.

G. Special Programs. Special types of programs are encouraged, such as demonstrations of psychological techniques and procedures, special interest and discussion groups, or other novel ideas which may be arranged through the divisional program chairmen. Individual members may take the initiative in suggesting such programs to the appropriate divisional program committee by March 22, but preferably considerably earlier if extensive planning is necessary.

H. Special Meetings, Luncheons, and Dinners. Alumni groups and others who desire special meetings should make their requests known to the APA Program Chairman by April 22. These should in-

clude a statement of estimated attendance, time required, and whether arrangements for luncheon and dinner are also desired.

I. Preconvention Sessions. The Convention Program Committee *will not take responsibility* for the scheduling of sessions to be held prior to the opening of the convention on September 1. Room reservations and all other arrangements will have to be made by the individuals concerned. These sessions may be listed in the program by title, time, and place only, if complete information is submitted to the Program Chairman by April 22.

II. REGULATIONS FOR INDIVIDUAL REPORTS

In accordance with actions of the Council of Representatives at the annual convention in 1949 the following rules shall be binding upon all divisions, unless special exception has been made by the APA Program Committee at the request of a particular division. If special exception to these general rules has been granted to a specific division it will be found under Section V.

A. Who May Read Papers

1. Any member of the APA (Fellow or Associate) may read a paper, provided that it has been duly accepted by the program committee of a division and placed on that division's program.

2. A non-member of the APA may read a paper provided that he is sponsored by a member of the APA and provided that his qualifications and his paper are acceptable to the program committee of the division concerned. (Foreign Affiliates and members of the Student Journal Group are not APA members and must be sponsored.) The APA member who agrees to sponsor a non-member must submit the abstract of the non-member's paper to the divisional program committee concerned, together with the scientific qualifications and the name of the recognized national scientific society of which he is a member. In the case of graduate students, the letter should indicate the level of training and any other factors which might aid a divisional committee in determining fitness to present a paper. The paper of a non-member accepted for the program will be indicated in the program and in the published abstract as follows: John Brown (Sponsor, John Doe). This rule applies to instances of multiple authorship where one of the authors is not an APA member.

3. No person may read more than one *volun-*

teered paper before any and all divisions, and no person may be a participant in more than one symposium. A member may read a paper *and* participate in a symposium, however.

4. Papers may not be presented by proxy. This rule may be waived in cases where the author's attendance is prevented because of his participation in national defense, provided that the Program Chairman is notified of the circumstances not later than August 1, 1952.

5. Each abstract *must* be accompanied by a signed 3 x 5 card, as follows:

Name(s): _____ (Last name first)

Title of paper: _____

Institution: _____

If this paper is accepted and placed on the program, I promise to appear in person and deliver it unless prevented by conditions beyond my control.

(Signature)

6. Multiple authorship will be permitted; the first listed name in a multiple authorship should be that of the person who will read the paper.

7. Where multiple authorship includes a non-member, either as primary or secondary joint author, the non-member shall be subject to the stipulations of Rule 2 above.

8. Two volunteered papers which are identical or substantially equivalent may not be read at the convention, either by a single person or by different members of a team of co-workers.

9. A paper previously read at any sectional meeting may not be read at the annual convention; this does not preclude acceptance of a paper presenting additional results on a topic concerning which a preliminary report has been made at a sectional meeting.

10. *The submission to the APA or its divisions of papers whose reading would violate these rules will disqualify the author from reading any volunteered paper at the APA convention to which these papers are submitted.*

B. Form of Abstracts

1. Abstracts must be limited in length to 300 words. Longer abstracts cannot be printed in the program. Abstracts should not contain tables, drawings, or graphs. These cannot be printed either. The reading time of the paper must be limited to 12 minutes.

2. Abstracts must be typed on one side of the paper only, double-spaced, and submitted in quadruplicate on 8½" by 11" white paper. The first copy should be on regular bond paper, not on onion skin or other thin paper. After they have been typed, the abstracts should be checked and proof-read carefully since they will be printed in the program in the form in which they are submitted.

3. Follow the form below in preparing your abstract:

Title of paper:

Author(s): Sponsor (if any):

Institution(s):

Text of abstract here

Size of slides (if any):

4. The text of the abstract should include a statement of the problem, subjects used, procedure, results, and conclusions.

5. Primarily discursive, theoretical papers, case studies, and the like are perfectly acceptable for the program. Abstracts of such non-experimental papers must be accompanied by a manuscript (in quadruplicate) of the *complete paper*, however, because it is almost impossible to judge the quality of a theoretical discussion from a brief abstract alone.

6. The revised format for abstracts and the promise to deliver the paper has been introduced to facilitate the editorial task of compiling the printed program.

C. Where to Send Abstracts

1. An abstract in quadruplicate, must be sent to one of the divisional program chairmen. (See page 63 for names and addresses.) Select the division which best represents the area of interest covered by the paper. Do not send abstracts to the Executive Secretary of the APA or to the APA Program Committee.

2. One need not be a member of the particular division to which he sends his abstract as long as he is a Fellow or Associate of the APA, or in the case of non-members if rules of Section IIA are followed.

3. The deadline for receipt of abstracts by the divisional program chairmen is March 22.

III. REGULATIONS FOR SYMPOSIA

4. *Initiation.* With the exception of sessions organized by the APA Program Committee, all symposia are organized by the divisions. Symposia organized by interdivisional committees should be

handled as symposia jointly sponsored by two divisions; i.e., sent in to the APA Program Committee as part of one division's program with the joint sponsorship indicated after the title. Repetition of symposia topics and speakers on successive years should be avoided unless unusual progress or development have taken place in the area in the meantime.

Individual members who wish to propose a topic or detailed plans for a symposium, either within the program of one division or on an interdivisional basis, should get in touch with the appropriate divisional program chairman (or chairmen), not with the APA Central Office or the APA Program Committee. A proposal for a symposium should indicate the topic for discussion, some comment on the relevance of the topic and the general idea the member has in mind as the basis for proposing the symposium, the name of the chairman and each participant, and a *signed pledge from each promising to appear in person to participate unless prevented from doing so by conditions beyond his control.* The pledge should be given on a 3 × 5 card just as is required of the authors of individual research papers. This is an important condition to be met in the proposal for a symposium since a member may participate in no more than one symposium on the program.

B. Technical Problems Only. Symposia will be considered appropriate only if the topic is sufficiently technical to insure a progressive movement of ideas during the session. It is essential that a symposium be well planned in advance with a thorough exchange of views, and preferably of manuscripts, by the participants. It is urged that the number of speakers on each symposium be kept to a minimum and that the chairman assume a real responsibility for the effective coordination of the session. Interdivision symposia are especially encouraged.

C. Deadlines. Suggestions for symposia must be in the hands of the appropriate divisional program chairman by March 22. The names and pledges of the chairman and participants should be turned in at that time, too. The divisional committee has to submit the completed proposal (including topic, names, and pledges) to the APA Program Committee by April 22. A member who wishes to propose a symposium should get it organized as early as possible and propose it in as complete a form as possible, because a divisional committee cannot

estimate the potential value of a symposium unless it knows who the participants are to be. Only a divisional program representative may submit the final symposium plans to the APA Program Committee.

IV. REGULATIONS FOR FILMS, FILM STRIPS, AND SLIDES

As in the past, a projection room and facilities for showing 16 mm. sound and silent films will be provided. Those desiring to present new films, film strips, or other audio-visual aids (including sound recordings) should send them in finished form to Dr. James J. Gibson, Department of Psychology, Cornell University, Ithaca, New York. Members desiring to request the showing of existing films should send the titles and distributors' names, indicating order of preference if more than one film is requested. The APA Audio-Visual Aids Committee, of which Dr. Gibson is chairman, will select the films to be shown and will schedule their presentation.

The deadline for the receipt by Dr. Gibson of films, other audio-visual aids, and requests for film showing, is March 22. Films received after this date, but before August 1, will be considered for showing but cannot be announced in the printed program.

Slides do not need to be submitted in advance, though notification of their intended use must be made on the abstract. Standard lantern slides ($3\frac{1}{4}'' \times 4''$) are preferred. If $2'' \times 2''$ slides are to be used this must be stated on the abstract. Those using $2'' \times 2''$ slides should check well in advance of the session to be sure that a projector is available at that time; to be on the safe side such a projector should be brought along if possible.

V. SPECIAL DIVISION RULES

All the divisions except the Division of Personality and Social Psychology and the Division of Industrial and Business Psychology will use the general APA rules.

Division of Personality and Social Psychology. This division requires that the following additional statement be submitted with each abstract. "The research described in this abstract and the necessary statistical computations have been completed."

Division of Industrial and Business Psychology. This division requires that *all* abstracts must be accompanied by the paper in its entirety.

VI. DIVISION PROGRAM CHAIRMEN

In order to facilitate the work of the APA Convention Program Committee it is requested that all division program material (papers and symposia), requests for meetings, etc., be submitted to the APA Program Chairman by *one* divisional representative, preferably the divisional program chairman.

VII. DEADLINES

- | | |
|-----------------|--|
| March 22 | Abstracts, manuscripts, and proposals for symposia must be in the hands of divisional program chairmen (see list, page 63). |
| March 22 | Films, etc., must be in the hands of Dr. James J. Gibson, Chairman, Audio-Visual Aids Committee. |
| April 22 | Requests for business meetings, special alumni or other group meetings, luncheons, and the like must be in the hands of the Chairman of the APA Program Committee. |
| April 22 | Completed divisional programs of individual papers, symposia, special meetings, etc., must be in the hands of the Chairman of the APA Program Committee. In addition to abstracts, the completed divisional programs include the general titles and the chairmen of the individual paper-reading sessions and symposium participants and chairmen, plus the signed pledge cards. |

DIVISION PROGRAM CHAIRMEN

1952 Convention

Division 1. Division of General Psychology

Professor M. E. Bitterman
Department of Psychology
University of Texas
Austin, Texas

Division 2. Division on the Teaching of Psychology

Dr. Wilbert J. McKeachie
Department of Psychology
University of Michigan
Ann Arbor, Michigan

Division 3. Division of Experimental Psychology

Dr. Claude E. Buxton
Department of Psychology
Yale University
New Haven, Connecticut

Division 5. Division on Evaluation and Measurement

Dr. William G. Mollenkopf
Educational Testing Service
20 Nassau St.
Princeton, New Jersey

Division 7. Division on Childhood and Adolescence

Dr. Marian Radke-Yarrow
Human Resources Research Office
707 Twenty-second Street N.W.
Washington 7, D. C.

Division 8. Division of Personality and Social Psychology

Dr. M. Brewster Smith
Department of Psychology
Vassar College
Poughkeepsie, New York

Division 9. The Society for the Psychological Study of Social Issues

Dr. Raymond Bauer
112 Lexington Avenue
Cambridge, Massachusetts

Division 10. Division on Esthetics

Dr. Melvin G. Rigg
Personnel Department
New Mexico Highlands University
Las Vegas, New Mexico

Division 12. Division of Clinical and Abnormal Psychology

Dr. O. Hobart Mowrer
Department of Psychology
University of Illinois
Urbana, Illinois

Division 13. Division of Consulting Psychology

Dr. Harold M. Hildreth
Chief, Clinical Psychology Section
Veterans Administration
Washington 25, D. C.

Division 14. Division of Industrial and Business Psychology

Mr. C. E. Jurgensen
Minneapolis Gas Company
8th and Marquette
Minneapolis 2, Minnesota

Division 15. Division of Educational Psychology

Professor Wm. C. Trow
School of Education
University of Michigan
Ann Arbor, Michigan

Division 16. Division of School Psychologists

Dr. Helen Bogardus
323 14th Avenue N.
Seattle 2, Washington

Division 17. Division of Counseling and Guidance

Dr. Roy N. Anderson
Dean of Students
North Carolina State College
Raleigh, North Carolina

Division 18. Division of Psychologists in Public Service

Mr. Albert P. Maslow
10 Thirty-fifth Street S.E., Apt. 202
Washington 19, D. C.

Division 19. Division of Military Psychologists

Dr. Franklin V. Taylor
Psychology Branch
Radio Division III
Naval Research Laboratory
Washington 25, D. C.

Division 20. Division on Maturity and Old Age

Dr. James E. Birren
5550 South Dorchester Avenue
Chicago 37, Illinois

Chairman of the APA Convention Program Committee

Dr. Howard F. Hunt
Department of Psychology
University of Chicago
Chicago 37, Illinois

Chairman of the Committee on Audio-Visual Aids

Dr. James J. Gibson
Department of Psychology
Cornell University
Ithaca, New York

STIPENDS FOR GRADUATE STUDENTS IN PSYCHOLOGY: 1952-1953

AMERICAN PSYCHOLOGICAL ASSOCIATION. OFFICE OF THE
EXECUTIVE SECRETARY.

THIS article presents information on financial assistance for graduate students in psychology for the academic year 1952-1953.¹ It follows essentially the form of similar articles which have appeared in previous issues of the *American Psychologist*, and much of the material has been taken or adapted from these earlier articles. The information was obtained by sending a copy of the statement on available fellowships and assistantships which appeared in the January 1951 *American Psychologist* (see Table 4 in the article "Graduate Training Facilities in Psychology: 1951-1952" by Helen M. Wolfle) to the administrative officer of each department or institution listed there, with the request that the data be brought up to date. Information on universities not sending in revised data is based upon information given in 1950-51. The statements for some departments and institutions have been withdrawn upon request.

The order of each entry and the abbreviations used are as follows:

Name and address of institution: The name and address of the institution apply throughout the description, and should be added to the names of officials and their departments when writing. If

¹ For additional information about graduate training facilities in psychology the prospective student is referred to the following articles:

WOLFLE, HELEN M. Graduate training facilities in psychology: 1951-52. *Amer. Psychologist*, 1951, 6, 3-30.

BOARD OF DIRECTORS, AMERICAN PSYCHOLOGICAL ASSOCIATION. Approved doctoral training programs in clinical psychology. *Amer. Psychologist*, 1951, 6, 171.

Stipends for graduate students in psychology 1949-50. *Amer. Psychologist*, 1949, 4, 3-16.

Stipends for graduate students in psychology and related fields, 1948-1949. *Amer. Psychologist*, 1948, 3, 20-29.

SEARS, ROBERT R. Clinical training facilities: 1947. A report from the Committee on Graduate and Professional Training. *Amer. Psychologist*, 1947, 2, 199-205.

SEARS, ROBERT R. Graduate training facilities. I. General information. II. Clinical psychology. *Amer. Psychologist*, 1946, 1, 135-151.

more than one department at a university is listed, the name and address apply to all such departments.

Application for admission: The student must apply for admission to graduate school as well as applying for awards. Thus, it is often necessary to write to two persons, one to apply for admission and the other to apply for an award. Larger universities sometimes request students to apply to the deans of colleges or heads of departments. Smaller universities typically request that applications be made to the Graduate School or Admissions Office.

Requirements for admission: Entrance requirements for admission to graduate work in psychology vary widely. However, it is almost invariably true that a superior undergraduate record is required. Some departments require or deem advisable certain types of undergraduate training in psychology and other fields; others require only the successful completion of the baccalaureate degree. Some departments like to have a personal interview with the applicant. Detailed information will usually be sent to a prospective applicant at the time he is sent an application blank by the institution. Such information can also usually be found in the university's graduate catalog.

Many departments require the Graduate Record Examination (GRE) or the Miller Analogies Test (MAT). If these tests are required before entrance, the department usually has some means of administering them in different cities.

Tuition: Tuition figures are usually for the academic year. In some cases, tuition is given for the quarter or semester, or according to semester or course hours.

The words *resident* and *non-resident* are used by state universities which charge out-of-state residents a larger sum than students from the state itself. The abbreviation *nr* refers to non-resident or out-of-state tuition.

The abbreviation *ex* means that the stipend carries with it exemption from tuition or that the stipend covers the cost of tuition. Thus, an entry

stipend, ex means that tuition charges are waived or that the student receives an award equal to the cost of his tuition charges. An entry *stipend, \$500 ex* means that the student receives \$500 plus exemption from tuition. A frequent advantage of scholarships and assistantships is the exemption from tuition, often a sum larger than the award itself.

Number of scholarships and fellowships available: The number listed is usually an approximate one. In many universities scholarships and fellowships are awarded on a merit basis without regard to field of interest. Thus, the applicants in one department are in competition with the applicants in all other departments of the university. Scholarships and fellowships usually do not require any work, and the recipient is expected to enroll as a full-time graduate student.

Number of assistantships available: Assistantships may be available for either teaching or research. The entry does not differentiate between a teaching assistantship in which a graduate student has charge of a class and a teaching assistantship in which the student assists a more advanced teacher by grading papers, acting as laboratory assistant, etc.

Research assistantships are ordinarily granted to students for work on research projects being conducted by members of a department. In some cases various skills, in statistical or laboratory methods, etc., are a prerequisite for these positions, and hence first-year graduate students may not be eligible.

Hours of work: Hours of work required are usually expressed in hours per week, though sometimes in teaching load or teaching hours. The number of hours indicated should, in many cases, be considered an approximation, especially in the case of research assistantships where the student is ordinarily expected to become part of a research team and also to consider his research work as part of his graduate training, rather than as a job to which he will devote only a limited number of hours.

Stipends: Stipends are usually expressed in terms of total stipend for an academic year of nine months. If expressed in any other terms, the unit, such as per month, is named. Stipends for assistantships are usually dependent upon difficulty of the work and training and experience required for it.

New students: New students are eligible for the award unless the statement is specifically made

that new students are not eligible. The statement then applies only to the positions immediately following.

To whom to apply: Scholarships and fellowships are usually applied for by writing to a university official, since ordinarily these awards are made for the whole institution, and not for just a specific department. Assistantships are usually applied for by writing to the head of a department. In the statements, the person to whom to apply is named following the description of the award or awards for which he receives applications.

The VA program and USPHS stipends: The Veterans Administration (VA) program provides for training, leading to the PhD degree, of qualified students in clinical psychology. Students enrolled in this program must satisfy the same requirements as other graduate students; they differ from them only with regard to their part-time employment by the VA in hospitals and clinics near the universities in which they are studying. Applications are made to the chairman of the department at any time; appointments are most likely to begin in the fall. Detailed information about the program may be secured by writing the Chief, Clinical Psychology Section, Neuropsychiatry Division, Department of Medicine and Surgery, Veterans Administration, Washington 25, D. C.

The United States Public Health Service (USPHS) program also provides some universities with stipends for selected graduate students in clinical psychology. Applications should be made to the chairman of the department of psychology at the desired university.

Other positions available: Many departments have other positions available than those listed here. Departments are often requested to recommend advanced students for teaching courses in elementary psychology, or to recommend students for teaching evening classes or courses in nearby smaller colleges. These positions are not usually available on the basis of paper record or application, and hence new students are ordinarily not considered for them. However, they are part of the possibilities for part-time employment while a graduate student.

The APA office, through its placement system, has frequent requests from prospective graduate students for part-time employment while pursuing graduate studies. Few such positions are listed with the APA office. The student who wishes part-

time work should write directly to the university in which he is interested.

Adelphi College, Garden City, N. Y. Apply for admission to Executive Secretary, Graduate Council. GRE required. Tuition: \$525 a year. Six research assistantships and teaching assistantships; stipend, ex. Two fellowships; 20 hours' work; stipend, \$1000; new students eligible. Apply to Dr. O. D. Anderson, Chairman, Dept. of Psych., or Dr. Gordon F. Derner, Director of Clinical Training Program.

Alabama, University of, University, Alabama. Apply for admission to Dean, Graduate School. GRE and MAT not required. Tuition: resident, administration fee of \$135; nr, administration fee of \$135 plus \$250 a year. One or two scholarships; no work; stipend, \$500 ex; new students eligible. Apply by March 1 to Dr. A. B. Moore, Dean, Graduate School. No fellowships or research assistantships. Four to five teaching assistantships; 15 hours' work; stipend, \$825 ex (tuition only, not administration fee); new students sometimes eligible. Apply as early as possible to Dr. Oliver L. Lacey, Chairman, Dept. of Psych.

American University, Washington, D. C. Apply for admission to Dean Pitman Potter, Graduate Division. GRE and MAT not required. Tuition: \$12 per credit hour. MA given in fields of child, educational, social and personality, counseling and guidance, applied social psychology, and general preparation for PhD work. PhD given in tests and measurements. The departments offer six to ten scholarships, fellowships, and internships varying in stipend from \$360 to \$2000 for the academic year. Qualified graduate students seeking the AM degree are eligible. Apply to Dr. Ralph Bedell, Chairman, Dept. of Psych. and Educ. (1951 statement.)

Arizona, University of, Tucson, Ariz. Apply for admission to Dean, Graduate School. GRE and MAT not required. Tuition: resident, registration fee of \$15 per semester; nr, \$150 per semester plus \$15 registration fee.

Department of Philosophy and Psychology. No scholarships, fellowships, or teaching assistantships. One departmental assistantship; 20 hours' work; stipend, \$600-800; new students eligible. Apply

by March 1 to Dr. M. R. Schneck, Dept. of Philosophy and Psych.

College of Education. No scholarships, research assistantships, or teaching assistantships. One fellowship; 12 hours' work; stipend, \$850; new students eligible. Apply by September 1 to Dr. O. K. Garretson, College of Education.

Arkansas, University of, Fayetteville, Ark. Apply for admission to the Registrar. GRE and MAT not required. Tuition: resident, \$112; nr, \$200 a year. No scholarships or fellowships. Two research assistantships in vision; 18 hours' work; stipend, \$900-1200 (ex for nr); new students eligible. Four research assistantships; 20 hours' work; stipend, \$1200 (ex for nr); new students eligible. Three teaching assistantships; 12 hours' work; stipend, \$600 (ex for nr); new students eligible. Apply by April 1 to Dean, Graduate School, or to Chairman, Dept. of Psych.

Baylor University, Waco, Texas. Apply for admission to Dean, Graduate School. MAT required. Tuition: \$382.50 a year. Research assistantships; 9-12 hours' work per week; stipend, \$720; students eligible after one-quarter's residence. Teaching assistantships may be arranged. Other positions available on hourly basis. Apply one-quarter before admission to Dr. W. T. Gooch, Dean, Graduate School.

Boston University, Boston, Mass. Apply for admission to Dean, Graduate School. Tuition: \$500. No scholarships. One teaching fellowship; 8 hours' work; stipend, \$1000 ex. Six assistant instructorships; 3-6 semester hours' work; stipend, \$75 semester course hour. Eleven teaching and general assistantships; stipend, ex. Positions available with contract research projects. VA program. Apply by April 15 to Dr. W. J. Pinard, Chairman, All-University Dept. of Psych.

Brooklyn College, Brooklyn 10, N. Y. Apply for admission to Dr. Wayne Dennis, Dept. of Psych. GRE required. Tuition by the course. No scholarships; there are a few assistantships and part-time teaching fellowships available.

Brown University, Providence 12, R. I. Apply for admission to Dean, Graduate School. GRE required. Tuition: \$520 a year. One or two scholarships; no work; stipend, 0-\$200 ex. One or two

fellowships; no work; stipend, \$900–\$1000 ex. Two or three research assistantships; 10 hours' work; stipend, \$900–\$1000 ex. Ten teaching assistantships; 10 hours' work; stipend, \$700–900 ex. Other positions available: summer research on contract. New students eligible. Apply by March 1 to Dean, Graduate School.

Bryn Mawr College, Bryn Mawr, Pa. Apply for admission to Dean, Graduate School. MAT recommended. Tuition: \$400 a year. Two scholarships; no work; stipend, \$400–650. One fellowship; 1½ hours' work; stipend, \$1250; first-year students not eligible. No research assistantships. One teaching assistantship; 10 hours' work; stipend, \$1000 ex. New students eligible. Apply by March 1 to Dean, Graduate School.

Buffalo, University of, Buffalo 14, N. Y. Apply for admission to Dean, Graduate School. GRE and MAT required. Tuition: \$450 a year. No scholarships or fellowships. Fifteen graduate assistantships with various duties; 12–20 hours' work; stipend, \$500–1000 ex; new students eligible. Three clinical internships; stipend, \$1200. Apply by March 15 to Dr. Carleton F. Scofield, Chairman, Dept. of Psych.

California, University of, Berkeley 4, Calif. MAT required. Tuition: resident, \$74; nr, \$374 a year. Teaching assistants, fellows, and research assistants excused from nr tuition by special permission.

Department of Psychology. Apply for admission to Graduate Division. One or two scholarships; no work; stipend varies, ex. Usually one to three fellowships; no work; stipend varies, ex. New students eligible. Apply by February 20 to Dean, Graduate Division. Four research assistantships; 20 hours' work; stipend, \$1575 (ex for students of distinguished scholarship). Thirty-two teaching assistantships; 20 hours' work; stipend, \$1260 (ex for students of distinguished scholarship). New students eligible. VA program. USPHS stipends open to second-year graduate students. Other positions available. Applications should be completed by February 1. Descriptive circular available. Write to Dr. C. W. Brown, Chairman, Dept. of Psych.

Institute of Child Welfare. Apply for admission to Dr. Harold E. Jones, Director. No scholarships or fellowships. Two to four research assistantships;

20 hours' work; stipend, \$1200 (ex if scholarship level justifies). Four teaching assistantships; 20 hours' work; stipend, \$1200 (ex if scholarship level justifies). New students eligible. Other positions available. Apply by May 1 to Dr. Harold E. Jones, Director. (1951 statement.)

California, University of, Los Angeles 24, Calif. Apply for admission to Dean, Graduate Division. MAT required. Tuition: resident, \$70; nr, \$300 a year. Eight fellowships for entire university; no work; stipend, \$1200. New students eligible. Apply by February 20 to Dean, Graduate Division. Two research assistantships; 15–20 hours' work; stipend, \$1200; new students not eligible generally; apply by February 20 to Dr. J. A. Gengerelli, Chairman, Dept. of Psych. Eight teaching assistantships; 15–20 hours' work; stipend, \$1200; new students not eligible generally. VA program. USPHS stipends. Apply by March 1 to Dr. J. A. Gengerelli, Chairman, Dept. of Psych.

Carnegie Institute of Technology, Pittsburgh 13, Pa. Apply for admission to Dean, Division of Humanistic and Social Studies. GRE preferred but not required. Tuition: \$600 a year. No scholarships, fellowships, or teaching assistantships. Six research assistantships; 9 hours' work; stipend, \$1350; new students eligible. Apply by March 1 to Dean, Division of Humanistic and Social Studies, Industries Hall.

Catholic University of America, Washington 17, D. C. Apply for admission to Dean, Graduate School of Arts and Sciences. GRE taken before or after admission; MAT recommended. Tuition: \$450 a year. Three scholarships; 15 hours' work; stipend, ex; new students not eligible. Five fellowships; full-time supervised experience; stipend, \$1350 for 11 months; new students eligible. No research assistantships. Four teaching assistantships, 10 hours' work; stipend, \$1350 for 9 months; new students not eligible. VA program. Apply by March 1 to Dr. John W. Stafford, Chairman, Dept. of Psych. and Psychiatry. Other university scholarships and fellowships available. Address the Registrar. (1951 statement.)

Chicago, University of, Chicago 37, Ill. Apply for admission to Director of Admissions. Tuition: \$624 a year.

Department of Psychology. MAT required. Six

to eight scholarships; no work; stipend, ex. Three to five fellowships; no work; stipend, \$500-1000. New students eligible. Apply by February 15 to Committee on Fellowships and Scholarships. Ten to 12 research assistantships and 5 to 6 teaching assistantships; 15-25 hours' work in each case; stipend, \$250 a quarter; new students ordinarily not eligible. VA program; USPHS stipends; new students ordinarily not eligible.

Committee on Human Development. ACE required. Number of scholarships and fellowships varies from year to year. Fourteen scholarships; no work; stipend, \$312-624. Two fellowships; no work; stipend, \$750-1000. New students eligible. Apply by February 1 to Committee on Fellowships and Scholarships. No teaching assistantships. Ten to 15 research assistantships; 20-40 hours' work; stipend, \$1500-3000; new students not eligible. Apply for admission by May 1 to Committee on Human Development.

Cincinnati, University of, Cincinnati 21, Ohio. Tuition: resident, \$300; nr, \$400 a year.

Department of Psychology. Apply for admission to Dean, Graduate School. GRE and MAT required. Two or three scholarships; no work; stipend, ex; new students occasionally eligible; apply by March 1 to Dean, Graduate School. No fellowships or research assistantships. Two teaching assistantships; 6 hours' work; stipend, \$200 (ex by departmental request); new students rarely eligible. Other positions available. Apply by June 1 to Dr. Arthur G. Bills, Chairman, Dept. of Psych.

Teachers College, University of Cincinnati. Apply for admission to Dean, Teachers College. GRE required for PhD candidates; MAT required for MA candidates. Two or three scholarships, no research assistantships. Fellowships vary; 10 hours' work; stipend, \$200 ex. Teaching assistantships vary; 15 hours' work; stipend, \$500 ex. Apply by April 15 to Dr. Carter V. Good, Dean, Teachers College.

City College of the City of New York, New York 31, N. Y.

Department of Psychology. Apply for admission to Professor J. E. Barmack, Secretary, Graduate Committee of Psychology. GRE and MAT not required. Tuition: approximately \$325 a year. No scholarships, research assistantships, or teaching assistantships. Fifteen fellowships; 15-20

hours' work; stipend, \$900-1200; new students eligible. Apply by May 1 to Professor Gardner Murphy, Chairman, Appointments Committee.

School of Education. Apply for admission to School of Education. GRE and MAT not required. Tuition: approximately \$300 a year; none for selected students in school psychology. No scholarships, research assistantships, or teaching assistantships. Three fellowships; 20 hours' work; stipend, \$950-1500 ex; new students not eligible. Other positions available. Apply by May 1 to Professor Harold H. Abelson, Director, Educational Clinic.

Claremont College, Claremont, Calif. (Includes Pomona, Scripps, and Claremont Men's College.) Apply for admission to Registrar, Harper Hall, Claremont College. MAT required. Tuition: \$440 a year. Two scholarships; no work; stipend, \$600; new students eligible. Seven fellowships; hours of work vary; stipend, \$400-800; new students not eligible. Apply by March 15 to Dr. F. Theodore Perkins, Chairman, Dept. of Psych. Two research assistantships; hours of work not specified; stipend, \$350; new students eligible; apply by September 1. Apply by March 1 to Dr. F. Theodore Perkins, Chairman, Dept. of Psych.

Clark University, Worcester, Mass. Apply for admission to Dr. Heinz Werner, Chairman, Dept. of Psych. GRE required. Tuition: \$450 in non-clinical fields, \$500 in clinical psychology, a year. Six scholarships; no work; stipend, \$450-650. Four fellowships; no work; stipend, \$450-700. Four teaching assistantships; 15 hours' work; stipend, \$600; new students eligible. One teaching fellowship; 15 hours' work; stipend, \$600; new students not eligible. VA program. USPHS stipends. Apply by February 1 to Dr. Heinz Werner, Chairman, Dept. of Psych.

Colgate University, Hamilton, N. Y. Apply for admission to Dr. Strang Lawson, Committee on Graduate Studies. GRE and MAT not required. Tuition: \$600 a year. No scholarships, fellowships, research assistantships, or teaching assistantships. One or two men accepted each year for MA work in conjunction with preceptorial work; stipend, \$1300.

Colorado State College of Education, Greeley, Colo. Apply for admission to Dr. A. F. Zimmerman. GRE required. Tuition: resident, \$144.75;

nr, \$159.75 a year. No scholarships, fellowships, research assistantships, or teaching assistantships. A few internships are awarded to students who have been on the campus at least a year; stipend, \$2600, \$2800, and \$3000. Apply at any time to President William R. Ross.

Colorado, University of, Boulder, Colo. Apply for admission to Chairman, Dept. of Psych. GRE and MAT optional. Tuition: resident, \$156; nr, \$351 a year. Four to eight scholarships; no work; stipend, ex; new students eligible; apply by March 1 to Dean, Graduate School. Three to four fellowships; no work; stipend, \$400–600 ex (new students eligible for \$400 stipend only); apply to Dean, Graduate School. One to two research assistantships; 8–16 hours' work; stipend, not specified; new students not eligible; apply at any time to Chairman, Dept. of Psych. Eight teaching assistantships; 6–12 hours' work; stipend, \$720–1450 (applicant may apply for ex); new students eligible. VA program. USPHS fellowships. Apply by March 1 to Chairman, Dept. of Psych.

Columbia University, New York 27, N. Y. Apply for admission to Office of University Admissions. GRE required. Tuition: \$600 a year. No scholarships. One fellowship; no work; stipend, \$1000; new students eligible. Apply by March 1 to Secretary of the University. No teaching assistantships. Ten research assistantships; 4–10 hours' work; stipend, \$500–1200, sometimes ex; new students rarely eligible. Apply by April 1 to Dr. H. E. Garrett, Chairman, Dept. of Psych. (See also Teachers College, Columbia.) (1951 statement.)

Connecticut, University of, Storrs, Conn. Apply for admission to Dean, Graduate School. MAT required. Tuition: \$150 a year. No scholarships or fellowships. One clinical assistantship; 18 hours' work; stipend, \$1305. Five teaching assistantships; 18 hours' work; stipend, \$1305. New students eligible. A limited number of other positions available. Apply by April 1 to Dean, Graduate School.

Cornell University, Ithaca, N. Y. Apply for admission to Dean, Graduate School.

Department of Psychology. Tuition: \$500 a year. GRE recommended but not required. No scholarships. Two fellowships; no work; stipend, \$800 ex. Apply by March 1 to Dean, Graduate

School. Six research assistantships; 20 hours' work; stipend, \$1500. Eleven teaching assistantships; 20 hours' work; stipend, \$1500. New students eligible. Apply by March 1 to Dr. Robert B. MacLeod, Chairman, Dept. of Psych.

School of Education. Tuition: \$300 a year. MAT required. No scholarships or fellowships. Two research assistantships; 20 hours' work; stipend, \$1800 ex. Four teaching assistantships in general psychology and reading; 20 hours' work; stipend, \$900–\$1800 ex. New students eligible. Other positions available. Apply by March 1 to Professor M. D. Glock, 311 Stone Hall.

Child Development and Family Relationships. Tuition: \$300 a year. GRE and MAT not required. Two fellowships for advanced married students; no work; stipend, \$2800. Two research assistantships; 20–25 hours' work; stipend, \$1400 ex. Five teaching assistantships; 20–25 hours' work; stipend, \$1400 ex. New students eligible. Other positions available. Apply by March 1 to Professor Robert H. Dalton, Chairman.

Delaware, University of, Newark, Del. Apply for admission to Dean, Graduate School. GRE and MAT recommended. Tuition: \$200 a year. No scholarships or fellowships. One research assistantship, 20 hours' work; stipend, \$1000. Two teaching assistantships; 20 hours' work; stipend, \$1000 ex. New students eligible. Apply by March 1 to Dr. H. M. MacPhee, Chairman, Dept. of Psych.

Detroit, University of, Detroit 21, Mich. Apply for admission to Dean, Graduate School. GRE required. Tuition: \$12.50 per semester hour. No scholarships. Six to eight fellowships; 18 hours' work per week; stipend, \$1050; new students eligible. Two to four graduate assistantships; 9 hours' work per week; stipend, \$650; new students eligible. Fellowships and assistantships renewable. Apply by March 1 to Director, Dept. of Psych.

Drake University, Des Moines, Iowa. Apply for admission to Registrar. GRE and MAT not required. Tuition: \$450 a year.

Duke University, Durham, N. C. Apply for admission to Dean, Graduate School. Tuition: \$470 a year. A number of fellowships, scholarships, and teaching and research assistantships; stipend, \$650–1800, with work required ranging from several hours to 20 hours per week. Assistants carry and

pay tuition for only four-fifths course program. VA program. USPHS stipends. Several clerkship stipends for advanced clinical students. Apply by March 1 to Dean, Graduate School.

Emory University, Emory University, Ga. Apply for admission to Chairman, Dept. of Psych. GRE required; MAT accepted if GRE unavailable. Tuition: \$525 a year. Scholarships and fellowships; stipend, \$525-1525; no work. New students eligible. Apply by February 15 to Chairman, Dept. of Psych. No research assistantships. Teaching assistantships; 10-15 hours' work; stipend, \$900-1200; new students eligible. Apply by February 15 to Dr. M. C. Langhorne, Chairman, Dept. of Psych.

Florida State University, Tallahassee, Fla. Apply for admission to Dean, Graduate Division. GRE and MAT recommended. Tuition: resident, none; nr, \$350 a year. Five teaching assistantships; stipend, \$2000. Seven graduate assistantships; 6 hours' work; stipend, \$750. Three research assistantships; 6-10 hours' work; stipend, \$900. New students eligible. Other positions available. PhD programs in clinical, child development, general-experimental, guidance. Apply by March 15 to Dr. H. L. Waskom, Chairman, Dept. of Psych.

Florida, University of, Gainesville, Fla. Apply for admission to the Registrar. Tuition: resident, fees only; nr, \$350 plus fees. No scholarships. Two fellowships; no work required; stipend, \$900; apply by March 1 to Dean, Graduate School. No research assistantships. Six teaching assistantships; 15 hours' work; stipend, \$850. Apply by March 1 to Dr. E. D. Hinckley, Chairman, Dept. of Psych.

Fordham University, New York 58, N. Y. Apply for admission to Registrar, Graduate School of Arts and Sciences. GRE required; MAT desirable but not required. Tuition: \$415 a year. No scholarships, fellowships, or teaching assistantships. Nine research assistantships; 15 hours' work; stipend, \$800 ex; new students eligible. Apply by March 1 to Dean, Graduate School.

Fort Hays Kansas State College, Hays, Kansas. Apply for admission to Dr. Ralph Coder. GRE and MAT not required. Tuition: resident, \$94; nr, \$148 a year. No scholarships, research or teaching assistantships. Two fellowships; 16 hours' work; stipend, \$540; new students eligible. Apply

by June 1 to Dr. H. B. Reed, Chairman, Dept. of Psych.

George Peabody College for Teachers, Nashville 5, Tenn. Program offered in conjunction with Vanderbilt University. Apply to Registrar for admission. Submit MAT or GRE scores. Tuition: \$132 a quarter (16 hours). Seventeen scholarships or fellowships for entire college; no work; stipend, \$500-1000. One assistantship; stipend, \$1500. Several teaching assistantships. Apply three months prior to desired date of entrance. For information, write to Dr. Nicholas Hobbs.

George Washington University, Washington 6, D. C. For MA apply for admission to Director of Admissions; for PhD apply for admission to Chairman of Graduate Council. GRE and MAT not required, but considered. Tuition: \$360 a year. Twelve to 15 scholarships; no work; stipend varies; new students eligible; apply by April 1 to Scholarship Committee. No fellowships. Three graduate assistantships for MA students; 10 hours' work; stipend, \$300; new students eligible; apply by September 1 to Dr. Thelma Hunt, Chairman, Dept. of Psych. Two teaching assistantships for PhD students; 10 hours' work; stipend, \$900 ex; new students eligible; a varying number of positions available as "Associates" to teach one section of the introductory course at \$270 per term per section. Apply by April 1 to Dr. Thelma Hunt, Chairman, Dept. of Psych. (1951 statement.)

Georgia, University of, Athens, Ga. Apply for admission to Dean, Graduate School. GRE required. Tuition: resident, \$57.50 per quarter; nr, \$157.50 per quarter. Research assistantships; stipend, \$1000. One teaching assistantship; stipend, \$1000. Apply by March 1 to Dr. Florene M. Young, Acting Chairman, Dept. of Psych.

Harvard University, Cambridge 38, Mass. Apply for admission to Dean, Graduate School of Arts and Sciences. Tuition: \$600 a year.

Department of Psychology. Either GRE aptitude test or MAT required. Scholarships; no work; stipend, \$300-1700; new students eligible. Apply by February 8 to Dean, Graduate School of Arts and Sciences. Six research assistantships; $\frac{1}{4}$ to $\frac{1}{2}$ time; stipend, \$500-1350; new students eligible. Five teaching fellowships; $\frac{1}{2}$ time for one semester;

stipend, \$800; new students not eligible. Apply for assistantships to Dr. E. B. Newman, Chairman, Dept. of Psych.

Department of Social Relations. GRE (aptitude and advanced test only) is required. Scholarships; no work; stipend, \$300-1700. Apply by February 8 to Dean, Graduate School. Research assistantships; $\frac{1}{2}$ to $\frac{3}{4}$ time required; stipend, \$450-1600. Apply to Professor S. A. Stouffer, Laboratory of Social Relations, Emerson Hall. Twelve teaching assistantships; $\frac{1}{2}$ to $\frac{3}{4}$ time required; stipend, \$640-1920. VA program. USPHS stipends. Apply to Professor Talcott Parsons, Chairman, Dept. of Social Relations.

Graduate School of Education. Apply for admission to Committee on Admissions, 4 Lawrence Hall, Kirkland St. GRE and MAT not required. Scholarships for students who have not previously been enrolled in the School, 15; and additional 11 are available for students who have been enrolled for at least one semester; stipend, \$400-1500. Apply by April 1 to Dr. David V. Tiedeman, Chairman, Scholarship Committee, Peabody House, 14 Kirkland Street, Cambridge, Mass. One to three half-time research assistantships in Laboratory of Human Development; stipend, \$1500. Apply by March 1 to Dr. Robert R. Sears, Palfrey House. Three to five teaching fellowships; stipend, \$1000-2400. Apply by April 1 to Dean Francis Keppel, Graduate School of Education.

Hawaii, University of, Honolulu 14, T. H. Apply for admission to Dean T. M. Livesay. GRE and MAT not required. Tuition: \$100 per semester. No scholarships, fellowships, or research assistantships. Two teaching assistantships; 20 hours' work; stipend, \$1578 ex a year; new students eligible. Apply by May 1 to Dean of Faculties.

Houston, University of, Houston, Texas. Apply for admission to Registrar's Office. GRE and MAT required after admission. Tuition: \$350 a year. No scholarships, fellowships, or research assistantships. One teaching assistantship; 6 hours' work; stipend, \$900; new students eligible. Other positions available. Apply by May 1 to Dr. L. T. Callicutt, Chairman, Dept. of Psych.

Howard University, Washington 1, D. C. Apply for admission to Dean, Graduate School. GRE required after admission. Tuition: \$171 a year. Six scholarships; no work; stipend, ex. Four fel-

lowships; six hours' work; stipend, \$450. New students eligible. Apply by April 15 to Dean, Graduate School. No research or teaching assistantships.

Idaho, University of, Moscow, Idaho. Apply for admission to Dean, Graduate School. GRE and MAT not required. Tuition: none. No scholarships, fellowships, or research assistantships. One service assistantship; 10-15 hours' work; stipend, \$900; new students eligible. Apply by May 1 to Dr. Wm. H. Boyer, Chairman, Dept. of Psych.

Illinois Institute of Technology, Chicago 16, Ill. Apply for admission to Dean W. A. Lewis, Office of the Graduate School. GRE and MAT not required. Tuition: \$600 a year. Some scholarships; hours of work not specified; stipend, part ex; new students eligible. No fellowships or teaching assistantships. One research assistantship; 14 hours' work; stipend, \$876. Other positions available. Apply to Dean, Graduate School.

Illinois State Normal University, Normal, Ill. Apply for admission to Director of Admissions. GRE and MAT not required for admission. Tuition: resident, \$90; nr, \$180. No scholarships, fellowships, or teaching assistantships. Two research assistantships; 15-25 hours' work; stipend, \$1350; new students eligible. Apply by April 1 to Dr. Victor M. Houston, Chairman, Dept. of Educ. and Psych.

Illinois, University of, Urbana, Ill. Apply for admission to Office of Admissions and Records. Tuition: resident, \$80; nr, \$160 a year.

Department of Psychology. MAT required. No scholarships. Indeterminate number of fellowships; no work; stipend, \$750-1000 ex; new students eligible. Apply by February 15 to Dean, Graduate College. Large number of research assistantships; 20 hours' work; stipend, \$1200-1600 ex; new students eligible. Twenty teaching assistantships; 20 hours' work; stipend, \$1200 ex. VA program. USPHS stipends. Apply to Lyle H. Lanier, Head, Dept. of Psych.

College of Education. MAT required for assistantships. No scholarships. Number of fellowships varies; no work; stipend, \$700-1000. Apply by February 15 to Dean, Graduate College. Number of research assistantships and teaching assistantships varies; 20 hours' work; stipend, \$1200-1400

ex; new students eligible. Apply to F. H. Finch, College of Educ.

Indiana University, Bloomington, Ind. Apply for admission to Admissions Committee, Dept. of Psych. GRE and MAT required. Tuition: resident, \$3.25 per semester hour; nr, \$10.25 per semester hour. One scholarship; no work; stipend, \$500 ex. One fellowship; no work; stipend, \$1000 ex. New students eligible. Apply by March 1 to Dean, Graduate School. Thirty-nine research and teaching assistantships; 12–20 hours' work; stipend, \$900–1500 out-of-state fees ex. New students eligible. VA program. USPHS stipends. Apply by March 1 to Admissions Committee, Dept. of Psych. Eleven teaching fellowships; to teach 4–6 credit hours; stipend, \$1500 out-of-state fees ex; for advanced students only.

Iowa State College, Ames, Iowa. Apply for admission to Dean, Graduate School. MAT required. Tuition: resident, \$138; nr, \$348 a year. No scholarships. Four fellowships; 8–10 hours' work; stipend, \$540–720 ex except for fee of \$15 per quarter. New students eligible. Two research assistantships; 12–20 hours' work; stipend, \$810–1125 ex as above. One teaching assistantship; 12–20 hours' work; stipend, \$810–1125 ex as above. New students eligible if qualified. A number of grants are made in conjunction with the Testing Bureau or the Driving Research Laboratory. Apply by May 1 to Dr. Wm. A. Owens, Chairman, Dept. of Psych.

Iowa, State University of, Iowa City, Iowa. Tuition: resident, \$156; nr, \$256 a year.

Department of Psychology. Apply for admission to the Registrar. GRE required. Two to five scholarships; no work; stipend, ex. Two fellowships; no work; stipend varies ex. Four to six graduate college research assistantships; 20 hours' work; stipend, \$900–1080 ex. Twelve to 15 departmental research assistantships; 20 hours' work; stipend, \$1150–1800. Ten teaching assistantships; 20 hours' work; stipend, \$900–1350 ex. New students eligible. VA program. USPHS stipends. Apply by March 1 to Dr. Kenneth W. Spence, Chairman, Dept. of Psych.

Iowa Child Welfare Research Station. Apply for admission to Dr. Boyd R. McCandless, Director. CAVD score desirable. Two scholarships; no work; stipend, ex. Two fellowships; no work; sti-

pend, \$270 ex. Apply by March 1 to Dean, Graduate College. Eleven research assistantships; 20 hours' work; stipend, \$720–900 ex. Eight teaching assistantships in preschool; 20 hours' work; stipend, \$270 ex. New students eligible. Apply by April 1 to Dr. Boyd R. McCandless, Director.

Johns Hopkins University, The, Baltimore 18, Md. Apply for admission to Dr. Eliot Stellar, Dept. of Psych. GRE and MAT recommended. Tuition: \$650 a year. Fifteen scholarships; no work; stipend, ex. No fellowships. Seven research assistantships; 13–20 hours' work; stipend, \$800–1500, usually ex. Eight teaching assistantships; 13–20 hours' work; stipend, \$800–1500, usually ex. New students eligible. Two to four additional positions available for graduate students. Apply by March 1 to Dr. Eliot Stellar, Dept. of Psych.

Kansas State College, Manhattan, Kansas. Apply for admission to Dean, Graduate School. GRE not required; MAT not required for admission. Tuition: resident, \$145; nr, \$225 a year. Counseling assistantships (Residence Halls, Counseling Center, Dean's Office); 20 hours' work; stipend, \$1260. Apply by April 1 to Dean William G. Craig or Dr. Arthur H. Brayfield, Chairman, Dept. of Psych.

Kansas State Teachers College, Emporia, Kansas. Apply for admission to Director, Graduate Division. GRE and MAT probably not required. Tuition: resident, \$114; nr, \$188 a year. No scholarships, research, or teaching assistantships. One or two fellowships; 10 hours' work; stipend, \$500. Apply to Dr. James H. Buchanan, Director, Graduate Division.

Kansas State Teachers College, Pittsburg, Kansas. Apply for admission to the Registrar. MAT given after admission. Tuition: resident, \$104; nr, \$170. No scholarships, research assistantships, or teaching assistantships. One fellowship; 12 hours' work; stipend, \$405; new students eligible. Apply to Dean Ernest Mahan, or Dr. Wm. A. Black, Chairman, Dept. of Educ. and Psych. (1951 statement.)

Kansas, University of, Lawrence, Kansas. Apply for admission to Committee on Graduate Admissions, Dept. of Psych. GRE and MAT not required. Tuition: resident, \$130 (\$180 for clini-

cal); nr, \$230 (\$330 for clinical) a year. Some scholarships given by university; full academic work; stipend, \$400 plus incidental fee. Some fellowships given by university; full academic work; stipend, \$600-700 plus incidental fee. New students eligible. Apply by March 1 to Dean, Graduate School. Four research assistantships; 20 hours' work; stipend, \$1000-1100. Eight teaching assistantships; 20 hours' work; stipend, \$1000-1100. New students eligible. VA program. Apply by February 1 to Committee on Graduate Admissions, Dept. of Psych. (1951 statement.)

Kent State University, Kent, Ohio. Apply for admission to Dean, Graduate School. GRE recommended; MAT frequently requested. Tuition: resident, \$90; nr, \$180 a year. No scholarships, fellowships, or teaching assistantships. Three to five research assistantships; 18 hours' work; stipend, \$650 ex first year, \$750 ex second year. New students eligible. Apply by May 15 to Dr. Raleigh M. Drake, Chairman, Dept. of Psych. Department can arrange for five internships in nearby hospitals; stipend ranges from maintenance to \$2000 per 12-month period, and from one quarter to four quarters. Other positions available at hourly rate.

Kentucky, University of, Lexington, Ky. Apply for admission to Admissions Office, Office of the Registrar. GRE recommended. Tuition: resident, \$120; nr, \$240 a year. Fifteen scholarships for entire graduate school; no work; stipend, \$400. Four fellowships for entire graduate school; no work; stipend, \$500. New students eligible. Apply by March 25 to Dean, Graduate School. Research assistantships often available. Six teaching assistantships; 12-15 hours' work; stipend, \$900; new students eligible. Other positions available. VA program. Apply by March 1 to Dr. J. S. Calvin, Chairman, Dept. of Psych.

Lehigh University, Bethlehem, Pa. Apply for admission to Director of Admissions. GRE occasionally required. Tuition: \$20 a semester hour. Tuition scholarships. Four research assistantships, one clinical assistantship, one teaching assistantship, and one counseling assistantship; 20 hours' work; stipend, \$1000 ex. New students eligible. Apply by May 31 to Director of Admissions.

Louisiana State University, Baton Rouge, La. Apply for admission to Dean, Graduate School.

GRE required for out-of-state students. Tuition: resident, \$60; nr, \$120 a year. No scholarships, fellowships, or teaching assistantships. Six research assistantships; 9-15 hours' work; stipend, \$500-700 ex; new students eligible. Apply by March 1 to Dr. Paul C. Young, Chairman, Dept. of Psych.

Louisville, University of, Louisville, Ky. Apply for admission to Executive Secretary, Dept. of Psych. and Social Anthropology. GRE and MAT required. Tuition: \$336 a year. Two laboratory, five teaching, and seven research assistantships; stipends, \$300-1950; 6-25 hours' work. New students eligible.

Loyola University, Chicago 11, Ill. Apply for admission to Dean, Graduate School. GRE and MAT required occasionally. Tuition: \$280 a year. No scholarships. Four fellowships; 12-20 hours' work; stipend, \$750-900 ex. One research assistantship; 20 hours' work; stipend, \$900 ex. Three teaching assistantships; 15 hours' work; stipend, \$900 ex and up. New students eligible. Both fees and number of assistantships are subject to "needs," and may vary. Apply by April 1 to Dean, Graduate School.

MacMurray College, Jacksonville, Ill. Apply for admission to Dean Wendell S. Dysinger. GRE and MAT recommended. Tuition: \$1150 a year. No fellowships or research assistantships. Three scholarships; no work; stipend, \$350. Six teaching assistantships; 12-15 hours' work; stipend, \$810. New students eligible. Other positions in cooperation with Jacksonville State Hospital available. Apply by May 1 to Dean Wendell S. Dysinger.

Maine, University of, Orono, Maine. Apply for admission to Dean Edward N. Brush, Graduate Studies. GRE required. Tuition: resident, \$265; nr, \$425. No fellowships or research assistantships. One scholarship; no work; stipend, ex; new students eligible. Apply by May 1 to Dean Edward N. Brush, Graduate Studies. One graduate assistantship in child study; 15 hours of laboratory work; stipend, \$1200; new students eligible. Apply by June 1 to Dr. A. Douglas Glanville, Chairman, Dept. of Psych.

Maryland, University of, College Park, Md. Apply for admission to Professor T. G. Andrews,

Chairman, Dept. of Psych. GRE and MAT required. Tuition: \$130 a year. No scholarships. One fellowship; no work; stipend, ex; new students not eligible. Seven research assistantships; 10-20 hours' work; stipend, \$500-1000 ex; new students eligible. Three teaching assistantships; 10-20 hours' work; stipend, \$500-1000 ex; new students not eligible. Five assistantships in University Counseling Center; 20 hours' work; stipend, \$1000-1200 ex; new students eligible. Other positions available through research contracts. Apply before March 30 to Professor T. G. Andrews, Chairman, Dept. of Psych.

Massachusetts, University of, Amherst, Mass. Apply for admission to Dean, Graduate School. MAT required. Tuition: resident, \$100; nr, \$220 a year. No scholarships. Two fellowships; 20 hours' work; stipend, \$800 ex. Two research assistantships; 20 hours' work; stipend, \$800 ex. Two teaching assistantships; 15 hours' work; stipend, \$350. New students eligible. Apply by June 1 to Dr. Claude C. Neet, Chairman, Dept. of Psych.

Miami, University of, Miami (University Branch), Fla. Apply for admission to Dr. Granville C. Fisher, Chairman, Dept. of Psych. Tuition: \$450 a year. No scholarships, fellowships, or research assistantships. Ten teaching assistantships; 15 hours' work; stipend, \$750 ex; new students eligible. Apply by June 1 to Dr. Granville C. Fisher, Chairman, Dept. of Psych.

Michigan State College, East Lansing, Mich. Apply for admission to Dean, Graduate School. Tuition: resident, \$141; nr, \$366 a year. Some scholarships specifically reserved for foreign students, with variable stipends ex; tuition scholarships available for graduate students, preference given to students from Latin America or Far East; additional partial maintenance scholarships for foreign students. Other fellowships; stipend \$600-1200 ex. Apply to Dean, Graduate School. Nine research and teaching assistantships; 20 hours' work; stipend, \$1100-1300 ex. VA program. Apply to Prof. Harold H. Anderson, Chairman, Dept. of Psych.

Michigan, University of, Ann Arbor, Mich. Apply for admission to Dean, Rackham School of Graduate Studies. MAT required. Tuition: resident, \$150; nr, \$400 a year.

Department of Psychology. Five tuition scholarships. Apply by February 15 to Dean, School of Graduate Studies. Ten research assistantships; 10-20 hours' work; stipend, \$750-1500. Thirty teaching assistantships; 10-20 hours' work; stipend, \$700-1400. New students eligible. VA program. USPHS stipends. Apply by March 1 to Dr. G. A. Satter, Dept. of Psych.

Institute for Social Research. A number of research assistantships for students majoring in social psychology. Apply to Dr. Rensis Likert, Director, Institute for Social Research.

Department of Educational Psychology, School of Education. Part-time teaching assistantships occasionally available. University fellowships and scholarships as above.

Mills College, Oakland, Calif. Apply for admission to Director of Graduate Studies. GRE and MAT not required. Tuition: \$257 a year.

Department of Psychology. No scholarships, research assistantships, or teaching assistantships. One fellowship; 12-18 hours' work; stipend, ex plus room and board; new students eligible. Apply by March 1 to Director, Graduate Studies.

Department of Child Development. No scholarships, fellowships, or research assistantships. Two teaching assistantships; 15-18 hours' work; stipend, ex plus room and board. Apply by March 1 to Dr. Elliot Diller, Secy., Committee on Fellowship Awards. (1951 statement.)

Minnesota, University of, Minneapolis 14, Minn. Apply for admission to Dean, Graduate School. Tuition: resident, \$38 plus fees; nr, \$100 plus fees a quarter. Holders of fellowships and assistantships pay tuition at resident rate.

Department of Psychology. GRE occasionally requested; MAT required. No scholarships. A large number of fellowships for entire university; no work; stipend, \$500 and up; new students eligible. Apply by February 15 to Dean, Graduate School. Number of research assistantships varies; 20 hours' work; stipend, \$1215. Fourteen teaching assistantships; 10-11 hours' work; stipend, \$608. New students eligible. VA program. USPHS stipends. Other positions available. Apply by February 15 to Dr. P. E. Meehl, Chairman, Dept. of Psych.

Office of Dean of Students. GRE and MAT not required. No scholarships, fellowships, or teaching assistantships. Nine administrative and clinical

assistantships offered in the Student Counseling Bureau, Loans and Scholarships, Student Activities Bureau, Bureau of Veterans Affairs, and Foreign Student Adviser's Office; 20 hours' work; stipend, \$1080-1620; new students eligible. Other positions available. Apply to Dean E. G. Williamson.

Industrial Relations Center. MAT required. No scholarships, fellowships, or teaching assistantships. Eight research assistantships; 20 hours' work; stipend, \$1215; new students eligible. Apply by March 1 to Dr. Dale Yoder, Chairman, Industrial Relations Center.

Institute of Child Welfare. MAT required. GRE occasionally requested. No scholarships or fellowships. Two research assistantships; 12-18 hours' work; stipend, \$810-1215. Seven teaching assistantships; 12-18 hours' work; stipend, \$810-1215. Apply by February 15 to Dr. John E. Anderson, Director, Institute of Child Welfare.

College of Education. MAT required. Eleven research assistantships; 20 hours' work; stipend, \$1215. Thirty-four teaching assistantships; 10-20 hours' work; stipend, \$608-1215. Apply to Dean, College of Education.

Mississippi, University of, University, Miss. Apply for admission to Dean, Graduate School. GRE and MAT not required. Tuition: resident, \$85; nr, \$200 a year. No scholarships or research assistantships. Two fellowships; no work; stipend, \$500 ex; new students eligible; apply by March 1 to Dean, Graduate School. Two teaching assistantships; 6 hours' work; stipend, \$800 ex; new students eligible. Student assistantships also available. Apply by April 1 to Dr. John B. Wolfe, Chairman, Dept. of Psych.

Missouri, University of, Columbia, Mo. Tuition: resident, none.

Department of Psychology. Apply for admission to Dr. Fred McKinney, Chairman, Dept. of Psych. MAT required. General Graduate School fellowships and contract research assistantships. Nine teaching assistantships; 20 hours' work; stipend, \$750-800 ex; new students eligible. Two or three other positions available. Apply by April 1 to Dr. Fred McKinney, Chairman, Dept. of Psych.

Department of Education (Guidance and Counseling). GRE recommended; MAT administered in first semester. One teaching assistantship; 20

hours' work; stipend, \$600. Three or four counseling positions in university counseling bureau; 16 hours' work; stipend, \$1200 for 12 months. First-year graduate students not eligible. Apply by April 1 to Dr. Paul C. Polmantier.

Montana State University, Missoula, Mont. No scholarships or fellowships. One assistantship; 12 hours' work; stipend, \$700 ex; new students eligible. Apply by May 15 to Professor E. A. Atkinson, Chairman, Dept. of Psych.

Nebraska, University of, Lincoln, Neb. Apply for admission to Dean, Graduate College. Tuition: resident, \$150; nr, \$300. Three fellowships for entire university; no work; stipend, \$100-1000 part ex; new students eligible. Apply by March 1 to Dean, Graduate College.

Department of Psychology. GRE and MAT required. No scholarships or fellowships. Eight graduate assistantships; 12 hours' work; stipend, \$600-750 ex. New students eligible. Apply by March 1 to Dean, Graduate College.

Department of Educational Psychology and Measurements. MAT given as part of qualifying examination, but GRE accepted in its place. No scholarships. Four research assistantships; 10 hours' work; stipend, \$600 ex. Three teaching assistantships; half-time work; stipend, \$1200. New students eligible. Apply by March 1 to Dr. D. A. Worcester, Chairman, Dept. of Educ. Psych. and Measurements.

Available to graduate students in either department. Four assistantships (psychometry, research, counseling, reading and study laboratory); 15 hours' work; stipend, \$600-750 ex. Apply to Dr. Arthur A. Hitchcock, Director, Junior Division and Counseling Service.

New Hampshire, University of, Durham, N. H. Apply for admission to Dean, Graduate School. GRE required for scholarships only. Tuition: resident, \$200; nr, \$450 a year. A limited number of scholarships; no work; stipend, ex. No fellowships or research assistantships. One teaching assistantship; 20 hours' work; stipend, \$1000, sometimes ex; new students eligible. Apply by April 15 to Dr. Herbert A. Carroll, Chairman, Dept. of Psych.

New Mexico College of Agriculture and Mechanic Arts, State College, N. M. Apply for admission to Chairman, Graduate Committee.

New Mexico Highlands University, Las Vegas, N. M. Apply for admission to Registrar. GRE and MAT not required. Tuition: resident, \$105; nr, \$210 a year. No scholarships, fellowships, or research assistantships. One teaching assistantship; 6 hours' work; stipend, \$900; new students eligible. Apply by July 1 to Dr. Melvin G. Rigg, Chairman, Dept. of Psych.

New Mexico, University of, Albuquerque, N. M. Apply for admission to Graduate Office. GRE required. Tuition: resident, \$100; nr, \$200 a year. No research assistantships. Perhaps one junior fellowship. Five teaching assistantships; 15 hours' work; stipend, \$900 and nr fee; new students eligible. Apply before March 1 to Dean, Graduate School.

New School for Social Research, Graduate Faculty of Political and Social Science, New York 11, N. Y. Apply for admission to Psychology Division. GRE and MAT not required. Tuition: \$14 a credit point. Scholarships and fellowships are for entire school; apply by April 30 to Graduate Faculty Registrar. One research assistantship; 40 hours' work; stipend, \$2000 ex. One or two teaching assistantships; 20 hours' work; stipend, \$2500-3000 ex. New students not eligible. Apply to Dr. Mary Henle, Spokesman, Psychology Division.

New York University, New York 3, N. Y. Tuition: approximately \$500 a year.

Department of Psychology. Apply for admission to Dean, Graduate School of Arts and Science. GRE and MAT required. No scholarships. Possibly one fellowship; no work; stipend, \$1000 maximum. Apply by February 15 to Dean, Graduate School of Arts and Science. Four research assistantships; 20 hours' work; stipend, \$1000 ex. Fourteen teaching assistantships; 20 hours' work; stipend, \$800-1000 ex. New students eligible. VA program. Apply by March 1 to Professor Stuart W. Cook, Chairman, Dept. of Psych.

Department of Educational Psychology. Apply for admission to Committee on Admissions. GRE and MAT not required. No scholarships, fellowships, or research assistantships. Three to eight teaching fellowships; 6 hours' of teaching; stipend, \$1100-1800 part ex; new students eligible. Other positions such as laboratory assistantships available. Apply by March 1 to Dean Ernest O. Melby.

North Carolina, University of, Chapel Hill, N. C. Apply for admission to Dean, Graduate School. GRE and MAT required. Tuition: resident, \$150; nr, \$360 a year. No scholarships. One fellowship; 15-20 hours' work; stipend, \$900 ex. One research assistantship; 15-20 hours' work; stipend, \$684 ex. Six assistantships; 15-20 hours' work; stipend, \$900 ex. New students eligible. VA program. USPHS stipends. Part-time work on contract research also available. Apply by March 1 to Dean, Graduate School.

North Dakota, University of, Grand Forks, N. D. Apply for admission to Director, Graduate Division. GRE required if student does not meet established standard for admission. Tuition: resident, \$60; nr, \$113 a year.

Northwestern University, Evanston, Ill. Apply for admission to Dept. of Psych. GRE desirable; MAT or Northwestern Analogies Test required. Tuition: \$450. Two scholarships; no work; stipend, ex; new students eligible. One fellowship; no work; stipend, \$900 ex; first-year students not eligible. Five departmental assistantships; 12 hours' work; stipend, \$1050 ex; new students eligible. VA program. USPHS stipends. Apply by February 1 to Dr. William A. Hunt, Chairman, Dept. of Psych.

Oberlin College, Oberlin, Ohio. Apply for admission to Dean, College of Arts and Sciences. Tuition: \$500. A limited number of scholarships; no work required; stipend, ex. Apply by March 15 to Dean, College of Arts and Sciences. One teaching assistantship; 9 hours' work; stipend, \$900 and ex for a half-schedule, appointment being for two years. Apply by March 15 to Dr. L. E. Cole, Chairman, Dept. of Psych.

Occidental College, Los Angeles 41, Calif. Apply for admission to Dr. Gilbert Brighthouse, Director of Graduate Studies. MAT and departmental qualifying examination required. Tuition: \$262.50 per semester. No scholarships, fellowships or assistantships available for 1952-53.

Ohio State University, Columbus 10, Ohio. Apply for admission to Entrance Board, Administration Building. GRE and MAT not required. Tuition: resident, \$120; nr, \$345 a year. Two or three scholarships; no work; stipend, \$400-600 ex;

new students eligible. One or two fellowships; no work; stipend, \$900 ex; new students seldom eligible. Apply by February 1 to Dean, Graduate School. Ten to fifteen research assistantships; hours of work vary; stipend ex plus varied amounts; new students occasionally eligible. Twenty-five teaching assistantships; 10 hours' teaching; stipend, \$1200 ex; new students eligible. Fifteen graduate assistantships; 15 hours' work; stipend, \$800 ex; new students eligible. VA program. USPHS stipends. Apply by March 1 to Dr. Harold E. Burt, Chairman, Dept. of Psych.

Ohio University, Athens, Ohio. Apply for admission to Director of Admissions. Tuition: resident, \$130; nr, \$280 per year.

Department of Psychology. GRE or MAT recommended. No scholarships or fellowships. Two graduate assistantships; 18 hours' work; stipend, \$800 ex, new students eligible. Apply by March 1 to Dr. Donald R. Clippinger, Director of Graduate Studies.

Department of Human Relations. GRE and MAT not required. Nine graduate assistantships; women interested in personnel work; 18 hours' work; stipend, \$800 ex; new students eligible. High school teaching or other experience desirable. Sometimes other positions available. Apply by March 1 to Dr. Donald R. Clippinger, Director of Graduate Studies.

Oklahoma, University of, Norman, Okla. Apply for admission to Dean of Admissions and Records. GRE and/or MAT recommended. Tuition: resident, \$48; nr, \$50 minimum to \$120 full schedule. One research fellowship; no work; stipend, \$300-600 ex for nr and half ex for residents. One research scholarship; no work; stipend, \$150-300 ex as above. Apply by March 1 to Dean of Graduate College. Five or six graduate or teaching assistantships; 20 hours' work; may carry 12 semester hours; stipend, \$900-1200 ex as above. One or two research assistantships; 10 hours' work; may carry 14 semester hours; stipend, \$450. Other graduate appointments including resident counselors. Apply by March 1 or November 1 to Chairman, Dept. of Psych.

Oregon, University of, Eugene, Oregon. Apply for admission to the Registrar. GRE or MAT not required for admission. Tuition: \$50 per term; \$150 per year. One scholarship; no work;

stipend, \$500 about half ex; new students not eligible. One fellowship; 15-16 hours' work; stipend, \$1200 about four-fifths ex; new students eligible. One research assistantship; 15-16 hours' work; stipend, \$1000 about two-thirds ex. Six teaching assistantships; 15-16 hours' work; stipend, \$800-1000 from about half to three-quarters ex. Apply by March 15 to Dr. Howard R. Taylor, Chairman, Dept. of Psych.

Pennsylvania State College, State College, Pa. Apply for admission to Dean C. O. Williams, Admissions Office. Tuition: resident, \$190; nr, \$410 a year.

Department of Psychology. Either GRE or MAT required. Ten scholarships; 5 hours' work; new students eligible. Three fellowships; no work; stipend, \$1000-2400 ex; new students not eligible. Three research assistantships; 20 hours' work; stipend, \$510-1010 ex; new students eligible. Three teaching assistantships; 20 hours' work; stipend, \$1010 ex; new students eligible. Other positions available. VA program. USPHS stipends. Apply by March 15 to Dr. B. V. Moore, Chairman, Dept. of Psych.

Instructional Film Research Program. GRE required. Two fellowships; full-time work; stipend, \$1000-2400 ex; new students eligible. Apply by March 15 to Dr. C. R. Carpenter, Dept. of Psych. Two research assistantships; 20 hours' work; stipend, \$1010 ex; new students eligible. Other positions available. Apply by March 15 to Dept. of Psych., Pennsylvania State College.

Pennsylvania, University of, Philadelphia 4, Pa. Apply for admission to Dean, Graduate School. GRE recommended. Tuition: \$25 per semester credit; \$600 per year. Two to four scholarships; no work; stipend, 0-\$400 ex. One to two fellowships; no work; stipend, \$200-1000 ex. New students eligible. Apply by March 1 to Dean, Graduate School. No teaching assistantships. Twenty laboratory and research assistantships; 20 hours' work; stipend, \$850-1000 ex; new students eligible. VA program. USPHS stipends. Apply by March 1 to Dr. R. A. Brotemarkle, Chairman, Dept. of Psych.

Pittsburgh, University of, Pittsburgh 13, Pa. Apply for admission to Dean, Graduate School. Tuition: \$11 a semester hour. (1951 statement.)

Department of Psychology. GRE or equivalent

required. No fellowships. Two scholarships; no work; stipend, ex; new students eligible. Apply by March 1 to Dean, Graduate School. Four research assistantships; 20 hours' work; stipend, \$1000 ex; new students eligible. Ten teaching assistantships; 6 class hours' work; stipend, \$1200 ex. MA students eligible. Other positions available. VA program. USPHS stipends. Apply by March 1 to Chairman, Dept. of Psych. (*Adapted from 1951 statement.*)

American Institute for Research. One research assistantship; 20 hours' work during academic year, full-time work in summer; stipend, \$2000; new students eligible. Apply by March 1 to American Institute for Research.

Princeton University, Princeton, N. J. Apply for admission to Dean Hugh S. Taylor, Office of the Graduate School. GRE required. Tuition: \$450 a year. Three scholarships; no work; stipend varies, average \$700 ex. Two fellowships; no work; stipend varies, average \$900 ex. Two research assistantships; 6-12 hours' work; stipend varies, average \$900 ex. Five teaching assistantships; 6-12 hours' work; stipend varies, average \$1000 ex. New students eligible. Other fellowships and research assistantships frequently available; stipend varies. Apply by March 1 to Dean Hugh S. Taylor, Office of the Graduate School.

Purdue University, Lafayette, Ind. Apply for admission to Dean, Graduate School. MAT sometimes required for applicants in clinical. Tuition: resident, \$110; nr, \$310. No scholarships or research assistantships. Ten fellowships; no work; stipend, \$1000 ex but \$25 fee. Sixteen teaching assistantships; 20 hours' work; stipend, \$1500 ex but \$25 fee. New students eligible. Other positions available. VA program. USPHS stipends. Apply by March 1 to Dean, Graduate School.

Radcliffe College, Cambridge, Mass. Women apply for admission to Dean, Graduate School. GRE or MAT required. Tuition: \$600 a year. One scholarship; no work; stipend, \$600-1200; new students eligible. Apply by February 8 to Dean, Graduate School. (For research and teaching assistantships, see announcement under Harvard University.)

Rochester, University of, Rochester 7, N. Y. Apply for admission to Dean, Graduate School.

GRE and MAT desirable. Tuition: \$19.67 per credit hour. Indefinite number of scholarships; no work; stipend, ex; new students eligible. No fellowships. Fourteen research assistantships; 18 hours' work; stipend, \$1200-1540 (ex in needy cases); new students eligible. Ten teaching assistantships; 15 hours' work; stipend, \$1000-1440 (ex in needy cases); new students eligible. VA program. USPHS stipends. Other positions available. Apply by March 15 to Dean, Graduate School.

Rutgers University, New Brunswick, N. J. Apply for admission to Director of Admissions. MAT required. Tuition: \$300 a year. No scholarships, fellowships, or research assistantships. One teaching assistantship; 15 hours' work; stipend, \$900 ex; new students eligible. Apply by March 1 to Dr. Morgan Upton, Chairman, Dept. of Psych. (*1951 statement.*)

Smith College, Northampton, Mass. Apply to Miss Florence E. Young, Executive Secretary, Committee on Graduate Study, by March 1. Tuition: \$500 a year. General college fellowships; no work; stipend, \$500 ex. Scholarships; no work; stipend, ex.

Department of Psychology. GRE not ordinarily required. No research assistantships. One teaching assistantship; 20 hours' work; stipend, \$900 ex; new students eligible.

Department of Education and Child Study. GRE optional. One assistantship. Three scholarships; no work; stipend, ex; new students eligible.

South Carolina, University of, Columbia, S. C. Apply for admission to Dean, Graduate School. GRE can be taken after probational admission. Tuition: resident, \$80; nr, \$250 a year. No scholarships or research assistantships. Two fellowships; no work; stipend, \$400-700. Apply by April 1 to Dean, Graduate School. Two or more teaching assistantships; 9 hours' work; stipend, \$1080. New students eligible. Other positions available. Apply by April 1 to Dr. M. Kershaw Walsh, Chairman, Dept. of Psych. and Philosophy.

South Dakota, University of, Vermillion, S. Dak. For admission apply to Director, Graduate School. GRE required. Tuition: resident, \$84; nr, \$126 a year. No scholarships or fellowships.

One research assistantship, primate laboratory; half-time; stipend, \$1200. Two teaching assistantships; 12 hours' work; stipend, \$675; new students eligible. Apply by May 1 to Dr. Henry V. Cobb, Chairman, Dept. of Psych.

Southern California, University of, Los Angeles, Calif. Apply for admission to Dr. Neil D. Warren, Chairman, Dept. of Psych. GRE can be taken during first year; MAT required. Tuition: \$20 per unit, \$500-600 a year. Number of scholarships varies; no work; stipend, part ex; apply by March 1. Three fellowships; no work; stipend, \$1600-2400. New students not eligible. Eight research assistantships; 20 hours' work; stipend, \$1800-2400; new students eligible. Six teaching assistantships; 9-24 hours' work; stipend, \$570-1520; new students not eligible. Several research positions also available. VA program. USPHS stipends. Apply by March 1 to Dr. Neil D. Warren, Chairman, Dept. of Psych.

Southern Methodist University, Dallas 5, Texas. Apply for admission to Dean, Graduate School. GRE or MAT sometimes required. Tuition: \$500 a year. No teaching assistantships. Five scholarships; 3 hours' work; stipend, ex. Two fellowships; 4 hours' work; stipend, \$650; new students eligible. Apply by March 15 to Dean, Graduate School. Three assistantships; 5 hours' work; stipend, \$200; new students eligible. Apply by April 15 to Dr. A. Q. Sartain, Chairman, Dept. of Psych.

Stanford University, Calif. Apply for admission to Admissions Office. GRE or MAT recommended. Tuition: \$660 a year. Unspecified number of scholarships for entire university; no work; stipend, \$50-900. Unspecified number of fellowships for entire university; no work; stipend, \$185-1500. One "honors" fellowship; stipend, \$1800. New students eligible. Apply by February 14 to Dean of Graduate Study. One research assistantship; half-time work; stipend, \$1500. Six teaching assistantships; half-time work; stipend, \$1500. Four clinical assistantships; hours of work vary; stipend, \$800-1600. New students eligible. VA program. USPHS stipends. Ten research assistantships on government contracts; stipend, \$150 per month. Apply by April 1 to Dr. Paul R. Farnsworth, Dept. of Psych.

Swarthmore College, Swarthmore, Pa. Apply for admission to Dr. R. S. Crutchfield, Chairman, Dept. of Psych. GRE and MAT not required. Tuition: \$650 a year. No scholarships, fellowships, or teaching assistantships. Four research assistantships; 12-20 hours' work; stipend, \$800 ex; new students eligible. Apply by March 15 to Dr. R. S. Crutchfield, Chairman, Dept. of Psych.

Syracuse University, Syracuse, N. Y. Apply for admission to Dean, Graduate School. Tuition: \$550 a year. (1951 statement.)

Department of Psychology. GRE required. Two scholarships; no work; stipend, ex. Two fellowships; no work; stipend, \$1100-1250 ex. New students eligible. Apply by March 1 to Dean, Graduate School. No research assistantships. One teaching assistantship; 20 hours' work; stipend, \$1000-1200. Apply by March 1 to Dr. Roland C. McKee, Chairman. (1951 statement.)

Psychological Services Center. MAT required. No scholarships or fellowships. Three research assistantships; 20 hours' work; stipend, \$1200-1500. Four counseling assistantships; 20 hours' work; stipend, \$1200-1500. New students eligible. Apply by March 1 to Dr. Raymond A. Katzell, Director.

Department of Educational Psychology. For work in developmental and clinical psychology number of scholarships varies; no work; stipend, tuition for two terms. Number of fellowships varies; no work; stipend, \$1150. Apply by March 1 to Dean, School of Education. Four research assistantships; 20 hours' work; stipend, \$1000-1200. Five teaching assistantships; 20 hours' work; stipend, \$1500. Apply by March 1 to Dr. Leon Gorrow, Chairman, Dept. Educ. Psych.

Teachers College, Columbia University, New York 27, N. Y. Apply for admission to Admissions Office. GRE required for clinical psychology. Tuition: \$20 a point. Eighteen scholarships for the entire college; no work; stipend, \$150-250. Eight fellowships for the entire college; no work; stipend, \$250-1500. Apply by January 1 to Committee on Scholarships and Fellowships. Five to eight research assistantships; number hours' work varies; stipend, \$200-3000 ex, partly to fully, depending on stipend; educational psychologists may apply to Dr. Arthur I. Gates, Chairman, Dept. of Educ. Psych.; clinical and school psychologists may apply to Dr. Laurance F. Shaffer, Chairman, Dept. of

Guidance; or apply to Dr. Irving Lorge, Executive Officer, Institute of Psych. Research; or to Dr. Stephen M. Corey, Executive Officer, Horace Mann-Lincoln Institute of School Experimentation; no time specified. Fifteen assistantships; number hours' work varies; stipend, \$200-1200. VA program. USPHS stipends. Apply to Dr. Arthur I. Gates, Chairman, Dept. of Educ. Psych.; or to Dr. Laurance F. Shaffer, Chairman, Dept. of Guidance.

Temple University, Philadelphia 22, Pa. MA candidates apply for admission to Dean William C. Caldwell; PhD candidates apply for admission to Dr. C. H. Smeltzer, Chairman, Dept. of Psych.; DEd candidates apply to Dean Conrad Seegars. GRE required. Tuition: \$414 a year. No scholarships or fellowships. Seven research assistantships; 12-15 hours' work; stipend, \$900 ex first year; \$1000 ex second year; new students eligible. Five teaching assistantships; teach 1-3 classes; stipend based on teaching-hour basis. First-year students not eligible. Apply by April 1 to Dr. C. H. Smeltzer, Chairman, Dept. of Psych.

Tennessee, University of, Knoxville, Tenn. Apply for admission to Dean, Graduate School. MAT required. Tuition: resident, \$150; nr, \$375 a year. No scholarships or fellowships. Two research assistantships; 11 hours' work; stipend, \$600-750 ex for the academic year, \$800-1000 ex for the calendar year. Two teaching assistantships; 11 hours' work; stipend, \$600-750 ex for the academic year, \$800-1000 ex for the calendar year. New students eligible. Three or four part-time clinical positions available. Apply by March 15 to Dean, Graduate School.

Texas State College, North, Denton, Texas. Apply for admission to Dean, Graduate School. GRE and MAT not required. Tuition: not specified. No scholarships, fellowships, or research assistantships. Four teaching assistantships; 6 hours' work; stipend, \$900; new students eligible. Apply by August 1 to Dr. Merl E. Bonney, Chairman, Dept. of Psych.

Texas, University of, Austin 12, Texas. Apply for admission to Registrar's Office. GRE and MAT required. Tuition: resident, \$25; nr, \$150 a year. One scholarship; no work; stipend, \$500. One fellowship; no work; stipend, \$500. One fellowship;

no work; stipend, \$1000. Six teaching assistantships; 10 hours' work; stipend, \$300-500. Five teaching fellowships; 20 hours' work; stipend, \$1000 ex. Twenty research assistantships; 20 hours' work; stipend, \$1000-1500. VA program. Apply by March 1 to Dr. Wayne H. Holtzman, Executive Secretary, Dept. of Psych.

Tufts College, Medford 55, Mass. (Greater Boston area.) Apply for admission to Dean, Graduate School. GRE and MAT recommended. Tuition: \$550 a year. Graduate work in experimental, physiological, and applied psychology only. No fellowships. One scholarship; no work; stipend, ex. Three research assistantships; half-time work; stipend, \$1200 ex. One teaching assistantship; half-time work; stipend, \$1000 ex. New students eligible. Other positions available. Apply by April 1 to Dr. Leonard C. Mead, Chairman, Dept. of Psych.

Tulane University of Louisiana, New Orleans, La. Apply for admission to Dean, Graduate School. GRE and MAT not required. Tuition: \$450 a year. No scholarships. Number of fellowships variable. Two research assistantships; 12 hours' work; stipend varies; new students not eligible. Six teaching assistantships; 12 hours' work; stipend, \$800 ex; new students eligible. Apply by March 31 to Dean, Graduate School. Some other research assistant positions are also available.

Tulsa, University of, Tulsa, Okla. Apply for admission to Dean, Graduate Division. GRE and MAT not required. Tuition: \$15 to \$17 a semester hour. No scholarships, fellowships, or teaching assistantships. One or two service assistantships; 12 hours' work; stipend, \$605 a year; new students eligible. Apply by June 1 to Dr. L. S. McLeod, Chairman, Dept. of Psych.

Utah State Agricultural College, Logan, Utah. Apply for admission to Dean Stewart Williams. GRE optional. Tuition: resident, \$87; nr, \$192 a year. No scholarships, fellowships, or research assistantships. Five teaching or counseling assistantships; 10 hours' work; stipend, \$405 or \$810; new students eligible. Clinical internships available in Idaho State Hospital, Blackfoot, Idaho. Apply by April 1 to Dean Stewart Williams or Dr. Arden N. Frandsen, Chairman, Dept. of Psych.

Utah, University of, Salt Lake City, Utah. Apply for admission to Dean, Graduate School. GRE recommended. Tuition (3 quarters): resident, \$121; nr, \$271. One to five scholarships for established research projects; new students eligible. No fellowships. Four research assistantships; 12–16 hours' work; stipend, \$250 quarterly; new students eligible. Four to five teaching assistantships; hours of work vary; stipend, \$60 per credit hour, quarterly; new students not eligible. Other positions available. Apply by April 15 to Dr. S. L. Crawley, Chairman, Dept. of Psych.

Vanderbilt University, Nashville 4, Tenn. Apply for admission to Dean, Graduate School. GRE and MAT required. Tuition: \$450 a year. Two scholarships; no work; stipend, \$750; new students eligible. Two fellowships; 6–10 hours' work; stipend, \$1000–1400; new students eligible. Four research assistantships; hours of work vary; stipend, \$1000–1400; new students eligible. Four teaching assistantships; 10 hours' work; stipend, \$1000–1400; new students not eligible. Other positions available. Apply by March 1 to Dean, Graduate School.

Vermont, University of, Burlington, Vt. Apply for admission to Professor Malcolm D. Daggett, Director of Graduate Study. GRE required. Tuition: resident, \$14 per semester hour; nr, \$17.50 per semester hour. Some teaching fellowships awarded to most promising applicants for graduate work irrespective of department; stipend, \$400–800. Apply by March 15 to Director, Graduate Study.

Virginia State College, Petersburg, Va. Apply for admission to Director, Graduate Division. GRE recommended. Tuition: resident, \$166; nr, \$201 a year. No scholarships. fellowships, or teaching assistantships. Six research assistantships; not more than 15 hours' work; stipend, \$300–500; new students eligible. Apply by March 1 to Director, Graduate Division. (1951 statement.)

Virginia, University of, Charlottesville 4, Va. Apply for admission to Dean, Department of Graduate Studies. GRE recommended. Tuition: resident, \$209; nr, \$359 a year. No scholarships. Number of fellowships varies; no work; stipend,

\$500–1000 ex. Apply by March 1 to Dean, Department of Graduate Studies. Number of research assistantships varies; 15 hours' work; stipend, \$600–900. Six to 10 teaching assistantships; 6–12 hours' work; stipend, \$200–800. New students eligible. Apply by June 1 to Dr. Frank A. Geldard, Chairman, Division of Psych.

Washington, State College of, Pullman, Wash. Apply for admission to Dean, Graduate School. MAT required but not for admission. Tuition: resident, \$55; nr, \$135 a year. No scholarships. Thirteen counseling assistantships; 20 hours' work; stipend, \$1200–1400 ex; new students eligible; apply by March 15 to Dean Arthur McCarten. Three to four research assistantships; 20 hours' work; stipend, \$1200–1400 ex. Five teaching assistantships; 20 hours' work; stipend, \$1200–1500 ex. New students eligible. Other positions on hourly basis available. Apply by March 15 to Dr. James H. Elder, Chairman, Dept. of Psych.

Washington University, St. Louis, Mo. Apply for admission to Dean, Graduate School of Arts and Sciences. MAT required. Tuition: \$450 a year. One or two scholarships; no work; stipend, \$450–1500. One or two fellowships; no work; stipend, \$450–1500. New students eligible. Apply by March 1 to Dean, Graduate School of Arts and Sciences. Four research assistantships; one-quarter or one-half time work; stipend, \$695–2000. Ten teaching assistantships; 3 or 6 hours' work; stipend, \$695–1320. New students not eligible. VA program. USPHS stipends. Other positions available. Apply by March 1 to Dr. Marion E. Bunch, Chairman, Dept. of Psych.

Washington, University of, Seattle 5, Wash. Apply for admission to Executive Officer, Dept. of Psych. Tuition: resident, \$112.50 a year; nr, \$262.50 a year. No scholarships. Four fellowships; 20 hours' work; stipend, \$1125 ex. Five teaching associates; 20 hours' work; stipend, \$1500 ex. VA program. Other positions available. Apply by March 1 to Dr. R. B. Loucks, Executive Officer, Dept. of Psych.

Wayne University, Detroit 1, Mich.
Department of Psychology. Apply for admission to Graduate School or to Gerald Rosenbaum, Graduate Chairman. GRE required. Tuition: resident, maximum \$200; nr, maximum \$400 a year. Two

teaching assistantships; 20 hours' work; stipend, \$1000 ex; new students eligible. Part-time positions available in Detroit.

Department of Clinical and Educational Psychology. Apply for admission to Graduate School. MAT required. Number of scholarships varies; 20 hours' work; stipend, \$1075 ex. Number of fellowships, research assistantships, and teaching assistantships varies; each requires 20 hours' work; stipend, \$1525 ex for each. New students eligible. Apply by May 1 to Dr. Gertha Williams, College of Education.

Department of Personnel Management, School of Business Administration. GRE required. Apply for admission to Graduate School or to Dr. Edward T. Raney, Department Chairman. Tuition: resident, maximum \$200; nr, maximum, \$400 a year. Two graduate assistantships available. Maximum is 30 hours' work; stipend, \$1200-2400. Opportunities available in industry for part-time work.

Wellesley College, Wellesley, Mass. Apply for admission to Chairman, Committee on Graduate Instruction. GRE required. Tuition: \$650 a year. Twenty-four scholarships and fellowships for all departments. Three teaching assistantships; 26 hours' work; stipend, \$900-1000 ex; new students eligible. Apply by March 1 to Professor Michael J. Zigler, Chairman, Dept. of Psych.

Wesleyan University, Middletown, Conn. Apply for admission to Dr. John W. Spaeth. GRE required. Tuition: \$600. No scholarships or fellowships. Two to three research assistantships and one teaching assistantship; 20 hours' work for each; stipend, \$1500; new students eligible. Apply by May 1 to Dr. David C. McClelland, Chairman, Dept. of Psych.

Western Reserve University, Cleveland 6, Ohio. Apply for admission to University Office of Admissions. MAT required. Tuition: \$16 a semester credit.

Department of Psychology. Three scholarships; no work; stipend, ex. Three fellowships; 15 hours' work; stipend, \$1200 ex. Five research assistantships and 6 teaching assistantships; 15 hours' work; stipend, \$700 ex, first year; \$800 ex, second

year; \$900 ex, third year. New students eligible. Other positions available. VA program. USPHS stipends. Apply by April 1 to University Admissions Office.

Personnel Research Institute. Six junior technical assistants; 40 hours' work; stipend, \$3000-3900 ex 3 hours' tuition per semester. Apply to Dr. E. K. Taylor, Director. Four field work assistantships; 20 hours' work; stipend, \$800-900 ex 9 hours' tuition per semester. Apply to Dean, Graduate School.

Wisconsin, University of, Madison 6, Wis. Apply for admission to Admissions Committee, Dept. of Psych. GRE and MAT not required. Tuition: resident, \$150; nr, \$450 a year. Eight scholarships; no work; stipend, \$500 (ex for out-of-state); new students eligible. Six fellowships; no work; stipend, \$450-2000 (ex for out-of-state); new students not eligible. Twenty research assistantships; 20-25 hours' work; stipend, ex for out-of-state. Fifteen teaching assistantships; 10-20 hours' work; stipend, ex for out-of-state; new students eligible. Other positions available. VA program. USPHS stipends. Apply by February 1 to Secretary, Dept. of Psych.

Wyoming, University of, Laramie, Wyo. Apply for admission to Director of Admissions. GRE and MAT not required. Tuition: resident, \$169.60; nr, \$379.60 a year. Scholarships for all departments; stipend, ex. Apply to Dean, Graduate School. No fellowships or teaching assistantships. One research assistantship; 15 hours' work; stipend, \$720 ex; new students eligible. Apply by March 1 to Dean, Graduate School.

Yale University, New Haven, Conn. Apply for admission to Dean, Graduate School. GRE required. Tuition: \$500 a year. Four to six scholarships; no work; stipend, ex. Four to six fellowships; no work; stipend, \$1000 ex. New students eligible. Apply by February 15 to Dean, Graduate School. Twenty research assistantships; 10-20 hours' work; stipend, \$500-1500. Four teaching assistantships; 10-20 hours' work; stipend, \$500-1500. New students eligible. USPHS stipends. Other positions available. Apply by February 15 to Mr. Irvin L. Child, Director of Graduate Studies, Dept. of Psych.

Across the Secretary's Desk

Toward a Sociology of Psychology

The yen to predict future events is strong. Some people may succeed in contracting their scope of concern so that only the present is salient and significant, but most of us feel a clear involvement in the future and have distinct preferences about both its form and duration. We live in the belief that today's discriminations and commitments have a bearing on the course of coming events. We react to our own reactions in terms not only of their present hedonistic yield and their effect on related segments of our lives but in terms of their bearing on next year's satisfactions.

Most American psychologists have a concern for the future of American psychology. They anticipate that American psychology will have a future, they are inclined to believe that this year's actions affect that future and they are possessed of articulate preferences about the form and direction our history will assume from 1951 to 1970 or 1990. It is easy for us to overestimate the significance of today's decisions for tomorrow's trends; it is clearly true that decisions by psychologists are not the only factors shaping our future and it may be true that our year-to-year decisions are relatively unimportant when compared with the social forces at work around us and upon us. It is hard to believe, however, that today's explicit decisions about such things as selection, training, legislation and ethics, decisions resting as they do on implicit assumptions both about the present and the future, are not helping determine the number and kind of people who will attend the 100th Annual Meeting of the Association. But even if we are, in harsh actuality, mere putty to be shaped by outside forces we still can profit by a knowledge of our future. Such knowledge will at least give us time to reconcile ourselves to the inevitable, thus avoiding the disagreeable and sometime debilitating effects of surprise. Therefore, it is a good thing to worry about the future of psychology. It is also a fascinating pastime.

A case can be made for the proposition that the best predictions about the future of psychology will come from a wrestling with such variables as are now current among sociologists, demographers, or cultural anthropologists. Many psychologists comfortably engage in intellectual activity only when

variables are amenable to precise definition and when data come in quantifiable form. But it may be that we presently can make the best predictions about ourselves in terms not of careful extrapolation from precise curves, but in terms of more abstract, and perhaps more genotypical, variables.

The present piece is an attempt to state general hypotheses—some of which may prove eventually testable—about the effect of certain "social forces" or "cultural trends" upon American psychology. The thinking that lies behind this essay starts with an analogy or a picture of some sort of entity—like an amoeba or a Lewinische field—existing in a supporting environment. This entity has its own internal structure (APA divisions, prestige systems, social and political organization, institutional controls, etc.), its own over-all form (size, distinctive differentiation from other entities, permeability of boundaries, etc.), and its own sort of symbiosis with its environment (it teaches the young, renders professional services, receives general status and income). The entity has its own internal dynamics. Particles within it have motives and patterns of interest; there are group mores and aspirations and inspirations. The entity also has its own ways of relating to other entities (psychiatry, social work, sociology), drawing similar nourishment from the same environment.

It may be possible, if we go about it right, to describe with relative precision the effect of specific environmental changes upon delineable processes within American psychology. The present paragraphs, however, sail along at an easier and more abstract level, attempting to set down some very general hypotheses about the over-all amount of environmental support for psychology and ways in which that support varies with gross trends in our society. Such hypotheses, though each must be prefaced with the limiting phrase, "other things being equal," may have the virtue of suggesting new ideas to some and of helping others to structure old ones. These hypotheses will also illustrate the possible shortcomings of so abstract an approach.

1. *A society's support for psychology will vary with the rapidity of change in that society's institutions.* Psychology could not exist in a tradition-bound society, where every individual's role is de-

finer and the ways of solving human problems are the same from one generation to another. Social change means human problems. When there are problems of group and individual adjustment, the society will support psychologists, sociologists, psychiatrists, anthropologists, palmists, and any others who appear to offer help in the solution of these problems. (A society may be expected to find out in due time who it is that offers real help and who is a faker.) It is possible to argue that the increase over the last few decades in support for specialists in human problems has been due to the rapidity with which institutions have changed. It is also possible to argue that both institutional change and support for psychology will continue to accelerate for some time.

2. Support for psychology will vary with the degree of individuation encouraged by a society.

Societies differ from one another not only with respect to the rapidity of institutional change but with respect to the amount of individuality forced upon the person. Any given society will also vary within itself from time to time in both respects. Our own society puts a great emphasis on individuality, on individual initiative. The individual is taught that he is a free agent. He seeks guidance from his own star rather than from the rules or from his father's footsteps. He chooses his own friends, his own clothes, his own jobs, his own wives. He is still subject to mass fads and group conformities, but he is urged to know himself, to find himself, to seek his own individual success and happiness. In church he is a unique soul, for His eye is on the sparrow. In school a modern teacher works to help him be himself and avoid absolute invidious goals. In industry his morale and welfare are major concerns of management. When individuals are no longer cogs in an industrial or educational or military machine, both the individuals and those responsible for them are prone to turn for help to specialists in human relations or "happiness."

Our own society has, in the last century, increased its emphasis on individuation. This increase has had an effect on psychology. It ought to be possible to estimate whether or not this trend has reached a zenith.

3. Support for psychology will vary with the amount of leisure time available to the members of the society.

The man completely occupied with survival does little worrying about the subtler aspects of happiness. Increased leisure leads to an increased concern for introceptive and introspective things. These "softer" concerns lead to a tolerance of and support for those who make "soft" things their business. Economic factors alone perhaps do not account for the greater frequency of psychoanalyses among the upper economic groups.

4. Support for psychology will vary with the standard of living in a society.

As the previous hypothesis suggests, psychology is still something of a luxury. Neither psychology as science nor psychology as service is perceived as bearing directly on survival, on basic diurnal needs. Foreign countries with low standards of living, in seeking American assistance, want first the agricultural experts and engineers. In time of depression, industry will probably scuttle its flossier personnel services before it fires technicians. A man will buy food before he will buy therapy. Perhaps the burgeoning of psychology and related fields in America has a direct relation to the high American standard of living. And perhaps if that standard of living declines, either acutely as in a depression, or chronically through overpopulation or a diminution of natural resources, the support for psychology—and to a lesser degree for medicine and physics and biology—will wither.

5. Support for psychology will increase with the urbanization of society.

Relatively speaking, rural people deal with things while city people deal with people. Problems in human relations occur more often in an urban setting. Interest in and felt need for human science is greater. Our demographers should be able to tell us whether the marked trend toward urbanization will continue.

6. Support for psychology will vary with the amount of interpersonal and intergroup communication in a society.

As literacy increases, as mass media impinge more and more on individuals in a society, there will be an increased awareness of what scientists and professionals can do. If scientists and professionals actually can do things people want done, this awareness will lead to increased demand, increased support. Perhaps the best current "customers" for psychology are the hundreds of thousands of undergraduate students who have been exposed to psychology courses.

Also, as more and more people are exposed to conflicting authorities and to a great variety of models for behavior—an exposure facilitated by movies, magazines, radio, newspapers, and television—we can perhaps expect an increased frequency of emotional problems, an increased awareness of the human factor, and a concomitant increase in support for psychology and related fields.

7. Support for psychology will vary with the intellectual freedom in a society.

An anti-intellectual society may give support to those sciences and professions promising practical and material pay-off, but such a society may be expected to show intolerance for "pure" research in any field and clear antipathy toward any aspect of any discipline that runs counter to prevailing political, social, or religious ideologies. Almost any aspect of psychology seems to threaten the authoritarian and the anti-intellectual. Psychology and related disciplines seem to be the first fields to suffer restrictions at the hands of dictatorial regimes. Psychologists are prone to probe into the very assumptions that the rigid social system, like the rigid personality, does not wish to question. Any social trend or political development that reduces the population's tolerance for ambiguity will mean a reduction of support for psychology, with the "softer" varieties of psychology feeling the bite first, the "harder," more obviously practical kinds of psychology later.

These seven hypotheses overlap and perhaps they are good only for armchair testing. But it may be

possible, through more precise definition, through the finding of meaningful indices of the general variables, to arrive within such a framework at significant statements about the past, the present, and the future of American psychology. If we succeed in setting up precise and testable hypotheses within the general framework described here, we will have to test them, of course, on the past and present of psychology. We can study various indices of the support for psychology as they relate to various discernible aspects of a variety of existing societies (e.g., the correlation between literacy rate and the number of psychologists per unit of population). Or we can study indices of support as they relate to evidences of past change in our own society. (What were the relative effects of the 1930-35 depression on physics and psychology?) Or we can study the relation between support for psychology and regional variations within our society. (Are there relatively more or relatively fewer psychologists per unit of population in areas of political conservatism?)

Eventually we should be able to construct a meaningful theoretical model to guide the research we do on ourselves. Eventually, the many studies of psychology may become truly additive, giving us sound and systematic data from which can derive good predictions about our future. It is a reasonable contention that such a consummation will be speeded along if we begin at the level here loosely referred to as sociological.

FILLMORE H. SANFORD



JOHN W. GARDNER
Vice-president, Carnegie Corporation of New York
Policy and Planning Board, American Psychological Association

Psychological Notes and News

William N. Fenton has been appointed the first executive secretary of the Division of Anthropology and Psychology of the National Research Council. He has been an ethnologist on the staff of the Smithsonian Institution.

The National Institute of Health has awarded grants totaling \$276,719 for twenty new research projects in psychology and related fields. Grants amounting to \$506,042 have been made for continued support of thirty-eight previously approved projects. Among the psychologists who have been awarded new grants, and the subjects of their research, are:

Harrison G. Gough: Empirical studies of social adjustment, social techniques, and personal values.

Chester W. Darrow: Electroencephalographic phase relationships and their physiological, neurological, and psychiatric significance.

Robert F. Winch: Theory of complementary needs in mate selection.

O. Hobart Mowrer: Quantitative comparison of two types of psychotherapy.

Robert R. Sears: Child-rearing in relation to personality development of young children.

Leslie Phillips: Relation of social adjustment to psychological and adrenal cortical reactions to stress.

Ronald Lippitt: Techniques for changing group acceptance and social adjustment of deviate members in classroom and camp groups of children.

Arthur Kornhauser: Factors affecting the mental health of workers in mass-production industry.

Ben Willerman: Security of individuals in groups and an experimental attempt to increase the security of insecure members.

Willis H. McCann and William H. Cadman: Dynamic processes involved in the "round-table" method of group psychotherapy.

Urie Bronfenbrenner: Persons and situation as determinants of constructive community behavior (The Springdale Project).

Marie Jahoda: Community factors affecting the degree of mental health of workers in a defense production community.

Martha Wolfenstein: Differential vulnerability of U. S. male adolescents to threats to safety and career continuity.

Emory L. Cowen: Certain socio-psychological and personality correlates of psychological rigidity.

The \$3,500,000 appropriation for the National Science Foundation has enabled the Foundation to begin two of its major programs: support of basic research and training of scientific manpower. Until late last fall the Foundation had been concerned primarily with planning and organization. Approximately \$1,500,000 of the available funds will be allocated to support of basic research; about \$1,350,000 for training; and the balance for promotion of basic research and education in the sciences, wider dissemination of scientific information, and other services including the support of the National Scientific Register. Chester Barnard, president of the Rockefeller Foundation, has been elected chairman of the National Science Board for a two-year term to succeed James B. Conant. Edwin B. Fred, president of the University of Wisconsin, has been re-elected vice chairman of the Board for a two-year term.

A Project for Research on Social Tensions is now underway in India. It is being cooperatively sponsored by Unesco, the Government of India, and the Indian Universities. Gardner Murphy has been acting as technical consultant. Several research teams have been organized and are at work on various aspects of the project. Leaders of present research teams are B. S. Guha, director of the department of anthropology of the Government of India; V. K. Kothurkar, reader in psychology at the University of Poona; H. P. Maiti, director of the Institute of Psychological Research and Service, Patna University; Radhakamal Mukerjee of the Institute of Sociology and Human Relations at the University of Lucknow; Kali Prasad, department of philosophy and psychology, University of Lucknow; Hilda Raj, department of anthropology, and L. C. Bhandari, department of psychology, Delhi University; Pars Ram of East Punjab University; C. N. Vakil, director of the School of Economics at Bombay University; G. D. Boaz, professor of psychology at Madras University; B. Kuppaswamy, professor of psychology at Presidency College; and Kamla Chowdhry of the Ahmedabad Textile Industry Research Association. The research is coordinated by a committee of six members of the Indian National Commission for Unesco.

Convention Calendar

AMERICAN PSYCHOLOGICAL ASSOCIATION

September 1-6, 1952; Washington, D. C.

For information write to:

Dr. Fillmore H. Sanford
1515 Massachusetts Avenue N.W.
Washington 5, D. C.

EASTERN PSYCHOLOGICAL ASSOCIATION

March 28-29, 1952; Atlantic City, New Jersey

For information write to:

Dr. Charles N. Cofer
Department of Psychology
University of Maryland
College Park, Maryland

WESTERN PSYCHOLOGICAL ASSOCIATION

April 25-26, 1952; Fresno, California

For information write to:

Dr. Richard W. Kilby
Department of Psychology
San Jose State College
San Jose 14, California

MIDWESTERN PSYCHOLOGICAL ASSOCIATION

April 25-26, 1952; Cleveland, Ohio

For information write to:

Dr. David A. Grant
Department of Psychology
University of Wisconsin
Madison, Wisconsin

SOCIETY OF EXPERIMENTAL PSYCHOLOGISTS

April 11-12, 1952; Columbia University, Arden House,
Harriman, N. Y.

For information write to:

Dr. W. J. Brogden
Department of Psychology
University of Wisconsin
Madison 6, Wisconsin

ROCKY MOUNTAIN BRANCH OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

May 2-3, 1952; Boulder, Colorado

For information write to:

Dr. Lawrence S. Rogers
1046 Madison Street
Denver 6, Colorado

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Number 3

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PSYCHOLOGY AND THE NEWSPAPER MAN¹

ALTON L. BLAKESLEE

Associated Press Science Reporter

QUITE some time ago psychologists reached the stage of variety mentioned by the Walrus in *Alice in Wonderland*. They talk of many things—of stomach ulcers and performance on jobs and biochemistry of mental illness, homogeneous subtests, childhood memories, human electroretinograms, sociometric tests, hunger for sugar, and factorability of factors and even the factorability of factored factors.

Now, some of these things are intensely interesting to people who are not psychologists. For psychology is the science of the human mind and emotions and human behavior. Psychologists are learning things that people want to know—why they feel like they do, act like they do, how to rear children, how to get more fun out of their jobs, how to solve many of their problems, how to live more fully up to their capabilities. Psychologists are beginning to find some of the answers, or at least suggestions about these matters which, above almost any other subject, interest the human being.

The first point, then, is that we can concede that the public is interested, or could be interested, in what psychologists are doing. The second point is that the public has a *right* to know. It is a fundamental right and strength of democracy. Psychologists are learning things that can be useful to people now—now when they need your information. They have a right, too, because the public supports much of your research, directly by taxation, or indirectly through universities or through patronage of private enterprises that use and want your services. The question of clear public understanding of what you do may become more and more important as more and more of the funds to support research come from public monies, whether taxwise or through voluntary contributions. The public and its elected representatives are beginning to hold the whip hand over what kind of research shall be financially supported and, therefore, made more easy to do.

¹ Adapted from a paper given at the symposium "Methods of Communicating Psychological Knowledge to Relevant Publics," at the 1951 APA meeting.

Let us grant, then, that scientists have an obligation and self-interest even, in informing the public of what they do. But scientists must realize something about this public interest. The public wants to know only what is useful and/or interesting to them. And this is not necessarily what is most interesting to the scientists themselves. It is the result, or the potentially useful, or something interesting or charming about nature that makes science a news story. This applies to every field of news. Scientists are most interested in science, just as bakers are most interested in baking. Scientists may be very interested in what Congress does, not as lawyers or congressmen, but as citizens. They want to know, from news stories, what the action means to them. They don't want it told to them in the legal language of the proposed bill. This is exactly the same thing that the non-scientific citizens want from a science story.

Only some of the things that psychologists do make news. In psychological research the methodology used and the validity of it is extremely important, of course. But whether methodology, or any other technical aspect of psychology, is interesting to other people, depends upon circumstances. To illustrate. You come from out-of-town and a friend in Chicago invites you to dinner. The roast beef is delicious, and you compliment your hostess. She says it's because at last she found one butcher in her neighborhood whom she can trust to give her really good cuts of meat. You're mildly interested, if at all, for you won't be buying your meat in Chicago. But if she says, "Oh, that was a cheap, tough cut of beef, but I have a new way of cooking it," you prick up your ears. You can use the methodology. Her information hits you in the stomach.

The moral is obvious. If you want to communicate your work to the public, tell them what is useful or interesting to them. And tell them in a way which will interest them. Don't feel upset if the public is not interested in everything that psychologists do. Or if they don't know or care about the fine points or great details of your science. Every-

one's information on any subject has certain limits, and usually very small limits in fields of knowledge that he doesn't use every day or study. Psychologists are just as vaguely informed or as badly misinformed about many subjects as the rest of us non-psychologists.

COMMUNICATION AND JARGON

It is rather commonly felt that psychologists are not succeeding in communicating what they know to the people whom they wish to know—or failing, at least, in telling it in exactly the way they would like it to be told. Actually, there is no insuperable problem here. The main difficulty is the psychologists themselves and what they are doing, or rather not doing, about spreading word of their research.

The greatest barrier is language—the use of technical language—by psychologists in talking with other people and even at times in talking with themselves. If the useful and interesting things about science are not being made known it is partly because of the way that scientists try to tell it. Scientists and science are the prisoners of technical language, if they insist upon using only technical language.

Scientific jargon has some valuable uses. A technical word or phrase sometimes saves words, and expresses meaning accurately. But it assures accuracy of understanding *only if* your listener understands the word. Often people in the same field of science fail to communicate accurately with each other because they are in different specialties. By insisting upon technical language, they make it too hard for another man to understand them. He misses something he'd like to know. I feel sure that has happened to some of you when you've listened to papers in a different specialty from your own.

Sometimes, this insistence is just a form of snobbery. Your listener, or reader, is often quite as bright as you are, or brighter. He just does not happen to have acquired the same vocabulary. Intentional failure to talk in common language is snobbery or stupidity or a refuge because you don't know what you're trying to say yourself. Almost every human being has some form of jargon peculiar to his activities—the jitterbug, the physicist, truck driver, surgeon, chemist, the cook and her colander. Anyone of them could puzzle the psychologist who happened not to have heard such technical terms or jargon before. But most people,

unless they wish to show off, do not intentionally use only technical language. They talk your language, or explain their terms if they see that you are puzzled or may be making a mistake in interpreting them. They want to be understood. If you go to Paris, do you speak Greek? Or Hindustani in Brooklyn?

Perhaps you must also ask yourselves if you really want the public to understand what you are doing and what you have learned, or if you are afraid to tell them. Because people don't know a certain jargon does not mean they are not intelligent or not willing to learn. Quite the contrary. Too commonly the mistake is made of underestimating the intelligence of the American people. They can and do understand your work, when it is told in words they are familiar with. They appreciate the knowing. But you can't expect them to go beating through the woods and briars to reach the one tree with one apple of one bit of knowledge. Scientists, in reading about other fields of activities, don't bother to do it, either.

COMMUNICATION AND ETHICS

One item in your proposed code of ethics is very disturbing and dangerous. It suggests, in effect, that every psychologist should insist upon reviewing, for accuracy, any story written by any newspaperman, magazine writer, radio commentator, or other writer. It cannot be done. It can't be done because this is censorship and anathema to the free press. It is a slap at the intelligence and integrity of the news profession. It suggests that you think you are somebody very special, deserving special treatment. Your demand would mean that the President of the United States, any congressman, any truck driver in an accident, should also have the right of reviewing anything written—to say, "yes, this is right," "no, this is not right," or "let's omit these facts."

I know your intention is good. You want to insure accuracy, because of the possible harmful effects of inadequate or misleading information. Reporters and other writers want their stories to be accurate, too. They are jealous of their reputations for good reporting. Mistakes get made. Some of the mistakes in facts or in emphasis are indefensible. But most of them are really minor. Scientists often raise howls of anguish over what they call terrible, wicked errors. When they recover sufficiently from their rage to cite chapter

and verse it quite often turns out that a headline is not exact or the choice of one word is wrong or there was a typographical error in the story or in the spelling of their names. Most of these objections reflect a tender skin and a fear—is it Freudian?—that they will be kidded by their associates. Your proposed censorship is a dead-wrong way to achieve accuracy in news stories. Accuracy can be achieved only by trust, experience, and full and complete cooperation between scientists and newsmen.

Reporters have to be the judges of news; for that is their business. They need, and they look for, assistance in learning what is new in technical fields and assistance in telling it simply and accurately to their readers. Help them, and psychological news will be reported accurately. Hinder them, and it will be reported not at all, or poorly because of the handicaps you impose.

PSYCHOLOGY AND THE NEWSPAPERMAN

A main way in which psychologists can tell people of their work is through newspapers. But if you want to tell them, you must understand newspapers and their mechanics.

Of course your understanding is not absolutely essential. Good reporters will get the story about psychology or a kidnapping or a baseball scandal despite the road blocks. But few stories in psychology are worth the investment of tremendous time and effort when there are as good or better stories to be had elsewhere.

Newspapers tell what has happened today, or been publicly learned today, on all kinds of subjects throughout the world. To do it takes fast work or preparation, or both. Take one story—a story of something reported at an APA meeting. It is written by a reporter who sends it to his newspaper office. In the Associated Press it first is handled by AP editors who put it on the wires for distribution among the 3,000 newspapers and radio stations who are members of the AP in the United States alone. It may also be sent abroad to some of another 1,000 newspapers and radio stations throughout the world who receive AP news service. To get on the AP wire in the first place the story has to compete for position on the basis of its news value compared with all the other stories on all other subjects breaking that day.

When the editor on a newspaper receives a story he decides whether he wants to use it and where.

He judges it on the basis of its interest to the public. This is a science story. Science stories do not have any God-given right to be printed. They must compete, in interest and value, with every other possible story, for precious space. If it is chosen as making the grade, it is given a headline, set in type, fitted into a page form for size, length, and pleasing makeup—and type doesn't stretch—given a mat impression, cast in type, put on the presses to print pages of newspapers. All this takes time.

Every other story and the ads in the newspapers are treated the same way. Speed is essential. Some pages are made up completely the day before, some left open for longer periods during the working part of that newspaper's day, for late-breaking stories of primary interest.

This is a mere sketch of the mechanical problems, and the skills and stages that enter into publishing one story in one newspaper. Now, let us get to the heart of the matter for reporters. We live by the facts of newspaper life. We have deadlines. By noon or earlier, an afternoon newspaper, for example, is pretty well filled up with news of that day. Many go to press early, with their final editions appearing early in the afternoon. If we listen to your speeches during the morning, write and deliver a story on them by noon, the story is very unlikely to get published in that afternoon newspaper, unless the news and interest are big enough to compete with late-breaking news, all of which is slated for page one. For by that time page one and places on one or two other inside pages are all that are not yet filled with news columns.

Well, you say, the story could be printed next day in the morning papers. So it could be. But our job is to report it for papers covering the time cycle in which the news happened. This lateness would mean we could never get anything in afternoon papers but reports presented the day before. You may say that is quite agreeable—why all the hurry when the research was two years in the making anyhow. The answer is that we are covering news announcements every hour, and we have competition, which is valuable in building good newspapers and wire services.

We must get our stories in to newspaper desks early. The best and most efficient way for us to cover a morning meeting is to be able to read your papers, or to talk to the speakers, in advance. Our

stories can arrive on the editor's desk early, and have a fighting chance of being printed. Many newspapers want and like science news. But they can't use it late, at the expense of much "hotter" news of spot importance. The meaning of all this is simple. If newspaper reporters are to have the chance of reporting scientific news, which often takes time to digest and write carefully and accurately, we must have the cooperation of scientists.

As an example of the kind of cooperation we need let us take one reporter working at an APA meeting. He has read the abstracts, in the program, and spotted eight or ten things that sound very interesting, newsy. He may well have chosen the prospects after consulting members or officers of the society for their opinion of what is significant. To write his story, he usually needs more information. He wants to see the full paper of the abstract. But the full paper has not been made available at the press room. He cannot locate the speaker. He then has a choice: to write on the basis of the abstract, which often is technical, or not to write it at all. So he may have to choose another prospect and go through the same procedure. His editor perhaps expects him to choose something. He's been assigned at salary and perhaps other expense to report your meeting.

Sometimes, he finally does locate the speaker he wants. If the speaker is shy, wary, unwilling to amplify, this is simply another hurdle to obtaining the facts for an accurate story. The degree of accuracy of human communication between scientist and reporter often depends upon the willingness of the scientist to be frank and explicit and clear, to point out what his research does mean, and what it does *not* mean. If he hides behind jargon, or distrust, the primary element of inaccurate reporting—inaccurate communication between two human beings—is born.

If you have nothing to say of public interest, tell the reporters. But consult with them whether it is something they, as better experts of newspaper

interest, consider to be news. If they are interested, explain your work, fully and completely, with hedges for accuracy, but with the hedges made clear. Honest reporters do not try to misrepresent you. They have ethics as high as those of any professional society. If your work is preliminary, not final, and only indicative of significance, say so, and say it clearly. If the reporter seems unfamiliar with your field—he may be an expert in other fields of reporting—make sure that you are understanding each other. Newspapers can't afford to have one reporter specializing only in psychology, another in psychiatry, another in physics or nuclear energy or medicine, or the translation of old Egyptian papyri.

Psychological knowledge will be reported successfully to the degree that psychologists cooperate in the problems of reporting it. The mechanics of achieving this are elementary. Make copies. Make your papers available in advance. They might even be selected well in advance of your meetings by those of you who are qualified to judge, or by asking newsmen what they want. Be available and cooperative for interviews to amplify moot or puzzling points, to tell the full story, or to give the "fr'instances" that make a story human and more meaningful.

Many societies with the highest professional standards take steps to make their news more fully available to the press. It can be done in many ways, expensive or inexpensive. Some require all speakers to submit an extra copy of their papers in advance. Some ask or require their members to write abstracts which describe their work in more popular language. Some have elaborate information offices doing this work all year round. The examples are all around you, in the operation of other societies, in the willingness of your own public information officer to do it for you. The decision as to the best method for this Association rests with you, your members, your budget, and your interest in the public.

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THE FOUNDING OF THE APA

WAYNE DENNIS AND EDWIN G. BORING

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THERE is, for APA members, inevitable interest in the founding of their association at Clark University on July 8, 1892. Fernberger (5) has already discussed this meeting on the occasion of the APA's fiftieth anniversary in 1942, but he left certain matters undetermined, including the question as to which psychologists were actually present. It is our present purpose to comment more precisely upon this meeting.

Fernberger obtained his information about this meeting from a printed pamphlet entitled *Proceedings of the American Psychological Association*, published or at least printed by Macmillan (2). It bears no date, but, since it contains accounts of the organization meeting in July 1892, the First Annual Meeting at the University of Pennsylvania (with Hall as President and Fullerton as host) in Philadelphia in December 1892, and the Second Annual Meeting at Columbia (with Ladd as President and Cattell as host) in New York in December 1893, the date of the pamphlet must be 1894, and presumably its author is Jastrow who was secretary those first two years.

It is less generally realized that an account of the preliminary meeting on July 8, 1892, was published only six weeks later in *Science* (1) for August 19. The rare pamphlet of 1894 reprints this earlier account of 1892 verbatim, except that it adds to the list of charter members the name of B. I. Gilman. Gilman's name seems to have been omitted from the *Science* list inadvertently, since both accounts affirm his presence by stating that he read a paper. The inclusion of Gilman makes the number of charter members twenty-six, but by no means all of them came. These charter members were those who accepted Hall's invitation and came to the July meeting and those who, invited, had "written letters of approval and accepted membership."

The distribution of the twenty-six charter members shows how the "new psychology" was spreading from the east to the west, how well the laboratory founding of the 1880's and the first years

of the 1890's had progressed. Here is the list of charter members, arranged by institutions.

Clark	6	W. H. Burnham, B. I. Gilman, E. H. Griffin, G. S. Hall, W. O. Krohn, E. C. Sanford
Harvard	3	W. James, H. Nichols, J. Royce
Columbia, McLean Hospital, Pennsylvania, Toronto, Yale	2 each	Respectively: J. McK. Cattell, J. H. Hyslop; E. Cowles, W. Noyes; G. S. Fullerton, L. Witmer; J. M. Baldwin, J. G. Hume; G. T. Ladd, E. W. Scripture
Brown, Indiana, Iowa, Michigan, Nebraska, Stanford, Wisconsin	1 each	Respectively: E. B. Delabarre; W. L. Bryan; G. T. W. Patrick; J. Dewey; H. K. Wolfe; F. Angell; J. Jastrow

Hall dominated the meeting. The idea seems to have been his. He issued the invitations. The meeting was held at Clark. Hall (aged 48) was the oldest charter member except for James and Ladd (each aged 50). James did not attend. He was in Switzerland (6, I, p. 320; 8, II, p. 142). It seems improbable that Ladd attended, since he is mentioned only as being a charter member and as appointed to the newly formed Council, which was instructed "to determine the place, time and programme for the next meeting and then to report a plan of organization." In 1892 Ladd and James were not only the oldest American "physiological psychologists," but they were also the authors of the compendious texts and the only important texts for the new science that had appeared in English.

The first Council consisted of seven members, James, Ladd, and Hall, all of them near fifty, and Fullerton, Cattell, Baldwin, and Jastrow, the young energetic group, whose ages ranged from thirty-two to twenty-nine.

It is clear from the account (1) that the committee or council of seven was elected by the membership—presumably those charter members present at the meeting of July 8. The Council did not

elect the charter members, as Fernberger suggests (5, p. 34). The charter members (perhaps on recommendation of this Council) elected five additional members: T. W. Mills of McGill, A. T. Ormond of Princeton, and three men with PhDs from Wundt at Leipzig—H. Münsterberg, appointed at Harvard and not yet arrived, E. A. Pace, since 1891 at Catholic University, and E. B. Titchener, appointed at Cornell and not yet arrived.

The question arises as to which of the twenty-six charter members were actually present at this meeting on July 8, 1892. Fullerton must have been there, for he presided. Papers were read by Bryan, Gilman, Krohn, Jastrow, Nichols, and Sanford, four of them Hall PhDs at Hopkins or Clark. They must have been there, though we shall see in a moment that Jastrow was not always certain about himself. Nevertheless, Jastrow is recorded as having been elected secretary at the July meeting and the official APA records show he was secretary at the first two annual meetings until replaced by Cattell in 1894. Thus Jastrow must have written the reports that we are citing (1, 2).

Four charter members are living today: Bryan, Dewey, Scripture, and Witmer. We have not been able to elicit reminiscence from three of these survivors, but Bryan has written us as follows:

I attended the meeting of the just then born APA at Clark in July of 1892. I cannot remember who of those named in the *Science* list were present. My impression is that fewer than half of those named in the list were at the meeting. Certainly *not* present: James, Royce, Ladd, Baldwin. The meeting was very informal. For example, my "paper" could only have been a brief report of "The Development of Voluntary Motor Ability," a study that appeared in the November, 1892, number of the *American Journal of Psychology*. Other papers at the meeting were of like informality. I am sorry that I cannot remember more.

Fifty-year-old memories are not too reliable. In January 1941 Fernberger wrote Jastrow to ask about the meeting in July 1892. Jastrow replied: "I was not present on July 8, 1892 at Worcester; presumably I was in Maine. I was, however, invited to join" (5, p. 35). In January 1943, however, Jastrow, in publishing his reminiscences of the early APA, said: "As I recall it, Stanley Hall arranged the meeting to organize an American Psychological Association at Clark University at a time when I would be visiting the eastern universities" in the interests of the Section of Psychology at the World Columbian Exposition (7, p. 65).

Jastrow did make this trip in the summer of 1892 and he seems to have solicited support for the Exposition's exhibit from the psychologists gathered at Worcester. He read a paper. He was elected Secretary. He presumably wrote and published the account of the meeting six weeks later. In fact, we even have Jastrow's permission to count him present, for in this same paper he wrote: "After fifty years memories acquire a haze of uncertainty. My recollections of the formation of the American Psychological Association must be subject to correction by whatever records may be available. My memory functions in terms of interest rather than of time and place" (7, p. 65). Cattell, moreover, seems to have had no doubt of Jastrow's presence and advised Fernberger to try to get more information about the meeting from Jastrow (5, p. 35).

Now let us call the roll for the meeting of July 8, 1892, beginning with Hall, who was certainly present, and passing on, through the various degrees of probability of attendance, to James, who was certainly absent.

1. Hall. Present. He was the host and prime mover.
2. Fullerton. Present. He presided.
3. Bryan, Gilman, Jastrow, Krohn, Nichols, Sanford. Present. They read papers. Jastrow was elected secretary and reported the meeting in *Science*.
4. Burnham and Gilman. Present. They were on the ground at Clark and could not have stayed away.
5. Delabarre from Brown, Cowles and Noyes from McLean Hospital. Probably present. They lived near and had accepted membership.
6. Scripture from Yale, Hyslop from Columbia, Witmer from Pennsylvania. Uncertain, yet they were in the east. Scripture and Witmer were individualists; they were not joiners.
7. Dewey at Michigan and Hume at Toronto. Uncertain, presumably too far away to come.
8. Angell at Stanford, Patrick at Iowa, Wolfe at Nebraska. Almost certainly absent, because they lived so far away. After all, this was only a big committee meeting. In 1892 the trip from California to Massachusetts and return would have taken Angell not less than eleven days on the train.
9. Ladd at Yale, Royce at Harvard, Baldwin at Toronto, Cattell at Columbia. Absent. Bryan from memory asserts the absence of the first three.

Ladd would have been important enough for mention if he had come (he was second president of the APA). Royce was not the organizing kind of psychologist. Baldwin in his two autobiographies makes no mention at all of the founding of the APA (3, 4). Cattell has testified to his own absence (5, p. 35).

10. James. Absent. He was at the moment in Switzerland. There is no mention of the founding of the APA in James's published letters (6, 8) nor in the letters between James and Hall preserved in the Houghton Library at Harvard. Cattell said that James "was not at the beginning particularly favorable to the organization" (5, p. 35).

That is the roll. We may assume that the first mentioned ten men were certainly at this preliminary meeting, probably the first thirteen; and it is very doubtful that more than eighteen of the twenty-six were there. •

It remains only for us to note that of the thirty-one members of the APA—the twenty-six charter members and the five new members elected in July—eighteen attended the First Annual Meeting at Pennsylvania in December 1892. Nine of them read papers. Present were Baldwin, Bryan, Burnham, Cattell, Fullerton, Hall, Jastrow, Ladd, Münsterberg, Sanford, Titchener, and Witmer—indeed an illustrious assembly of that time, with only James and Dewey absent from among the great. James was still abroad. Both James and Dewey attended the Second Annual Meeting at Columbia

the next year. American psychologists have always been apt and active organizers—of laboratories, journals, and societies—in the 1880's and 1890's as well as in the 1940's and 1950's. Hall, the APA's founder in 1892, was representing American psychologists in their characteristic organizational activities, just as truly as James, the functionalist, was able to give form to the characteristic pattern of their thinking.

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ON THE TRAINING OF PSYCHOLOGISTS IN GERMANY

HANS G. PFAFFENBERGER

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MANY personal contacts with American psychologists in 1950 have shown the author a widespread interest in German psychology after many years of interruption of all exchange and of the usual flow of information. The present note will try to fill this gap with some facts and comparative comments on the training of psychologists in Western Germany. Very little is known, even in Germany, about Eastern Germany.

Since fundamental differences exist between American and German education these differences in preprofessional education will be considered first. In the traditional German educational system about 80 per cent of the students receive eight years of elementary education and then go into the trades or labor. The remaining 20 per cent shift from elementary to secondary education at age 10 or 11, after the fourth grade. In the *Höhere Schule* (secondary education) they continue for eight years. The final diploma, *Abitur*, is the entrance requirement for German universities.

There are different types of *Höhere Schule*. One of them, the *Gymnasium*, is generally considered the preparatory school for the universities. It favors the humanities in its curriculum. After completing the *Gymnasium* the student has had eight years of Latin, six years of Greek, three years of French or English, as well as ancient and modern history, German language and literature, mathematics, and other courses—but no psychology courses. The time spent in school thus amounts to eight years, about 42 weeks a year, about 30 hours a week. Besides this, homework figures prominently in contrast to the American high school. All courses in the *Höhere Schule* are obligatory with a few additional electives for the most able and most interested students (mostly another language, music and art education, the school band, etc.).

The other types of the *Höhere Schule* (*Oberschule*, *Realgymnasium*, *Oberrealschule*, etc.) differ from the *Gymnasium* only in the curriculum. Their

emphasis is less on the humanities, and more on science and the modern languages. A larger percentage of their graduates go into business, civil service, and administrative jobs, but some enter the university.

Because of the differences in starting age, curriculum, time spent in school and on homework, the *Abitur* is not comparable to a degree received at approximately the same age level in American schools. In former times the *Abitur* used to be equivalent to the BA, but now because of the general slackening of academic standards the best guess is that it falls approximately one year short of the BA. A comparative evaluation, however, is extremely difficult and it may be assumed that individual differences are more important for the outcome of the educational process than the differences between the two systems.

With these considerations in mind we may now explore professional training. It starts at the university level and is approximately equal in form and content to graduate study in American universities. It leads in all subjects to final degrees (doctoral degrees, *Staatsexamina*, diplomas) after a minimum of from three to five years according to subject matter and professional standards in different professions.

Since 1941 German universities have been granting two different degrees in psychology: the doctorate and the diploma of psychology. They are not sequential degrees like the MA and PhD, but require the same minimum amount of training time (8 semesters) and they are equivalent as far as professional standards and admission to professional organizations are concerned. They differ chiefly in the academic versus professional emphasis.

The doctorate, usually the *Dr. phil.* or PhD but in some universities the *Dr. rer. nat.* or Doctor of Science, is granted after the well-known traditional university training with psychology as a major, and two minors which are very often pedagogy,

German literature, philosophy, history, etc., and a doctoral dissertation in the major field of psychology. In contrast to American university training there are no required courses or credits and no required professional or practical training.

The diploma of psychology, on the other hand, stresses the professional aspect of psychology in its requirements and examinations. Before being admitted, the student must have acquired the Abitur of a Höhere Schule. In addition he must pass an entrance aptitude examination, and have worked for one year in the field of education, human relations, child welfare, social work, or some similar field before starting his academic work. After a minimum of five semesters he can apply for the preliminary examination (Diplom-Vorprüfung). In partial fulfillment of the Vorprüfung a thesis has to be written on a theme given by the examination committee. The thesis is "to show that the candidate can do independent research" and has to be finished within eight weeks.

The oral examination for the Vorprüfung covers the following fields:

Allgemeine Psychologie—general psychology
Entwicklungspsychologie—developmental psychology
Charakterkunde—theory of personality
Ausdruckspsychologie—psychology of expressive movements
Biologisch-medizinische Hilfswissenschaften—fundamentals of biology, physiology, and medical psychology
Philosophie—philosophy

Before applying for the final examination (Diplom-Hauptprüfung) the student must meet the following additional requirements:

1. He must have passed the preliminary examination (Vorprüfung).
2. He must have done academic work for at least three more semesters, i.e., a minimum of eight semesters, or four years, altogether.
3. He must have had at least three internships of six weeks each ("under supervision and with success") in schools, homes for delinquent youth or orphans, welfare agencies, vocational guidance offices, child guidance clinics, etc.

The final examination itself consists of an oral and a written part. The oral part covers all the following fields:

Psychologische Diagnostik—diagnostic methods
Angewandte Psychologie—applied psychology
Pädagogische Psychologie und Psychagogik—educational psychology and psychotherapy
Kultur und Völkerpsychologie—psychology of culture, religion, etc., social psychology
Allgemeine Psychopathologie—psychopathology

It is evident that there are difficulties in translating these terms. Their different meanings in American and German psychology would involve writing a treatise on the differences between American and German psychology and their cultural and historical causal factors.

For the written examination of the Diplomprüfung the candidate has to write two papers under supervision, for four hours each, on a theme given by the examination committee. They are usually either actual case studies or on diagnostic and applied methods in psychology. They are, of course, of the essay type for objective tests are not used in German universities. After passing this final examination the academic degree of Diplompsychologe is granted.

There are only slight variations in requirements and examination procedures among the fifteen universities in Western Germany. The real differences in training are probably greater than the almost uniform regulations would suggest, but certainly much smaller than among American universities. As shown above, there is also considerably less specialization in the field than in the United States, at least as far as manifested in curricula, examinations, job titles, etc. Finally, in Germany professional standards and the employment situation do not allow employment or admission to the professional organization, the Berufsverband Deutscher Psychologen, below the doctoral or diplomate level.

Manuscript received June 25, 1951

History and Purposes of the International Council of Women Psychologists

Ten years ago a group of women psychologists under the leadership of Clairette P. Armstrong and Gladys C. Schwesinger met in New York and decided to organize the National Council of Women Psychologists. The purpose of the Council was to marshal the knowledge and skills of the group for the defense and support of the government during World War II. The charter members elected Florence L. Goodenough, president, Helen Peak, vice-president; Gladys C. Schwesinger, secretary, and Theodora Abel, treasurer.

Since transportation was limited, local chapters were established throughout the country, whose main aim was applying psychology to the general defense effort. One of the major projects during the early years was the preparation of a series of *Outlines for Lectures* to serve as guides for psychologists lecturing to groups on national defense. The series was a popular one and covered such topics as "Teaching Babies to Eat under War-Time Conditions" (Crutcher); "Meeting Emotional Strain in School Teachers" (Strang); "Teaching Leaders for Discussion Groups" (Fjeld); "Challenge of the War to Rural Citizenship" (Portenier); "Problems of Youth" (Valentine); and a six-sessions group; "Psychological First Aid" (Gilbert and Armstrong).

Articles on women psychologists, their work, training, and opportunities as well as expanding opportunities for women psychologists in the postwar period appeared in various psychological journals to encourage women and agencies to cooperate in order that manpower shortages be lessened without lowering standards.

In addition to Dr. Goodenough, other wartime presidents of the National Council of Women Psychologists were Clairette Armstrong and Gertrude Hildreth. During the second year of Dr. Hildreth's presidency, the question arose of whether the National Council of Women Psychologists should be disbanded since its primary function had been realized. At the Philadelphia meeting it was decided to reorganize the group into the International Council of Women Psychologists in order "to promote psychology as a science and as a profession, particularly with respect to the contribution of women throughout the world." Today its members encircle the earth living on all five continents and on some of the islands in between.

ICWP has three classes of members: Fellow, Associate, and Professional Affiliate. The third class was established to admit women who could not meet the qualifications of psychologists but who as educators, social scientists, doctors, and professionals in allied

fields would be valuable co-workers for international understanding and fellowship. In the fall of 1950, the Council voted to admit men psychologists to the group on their petition. Already such petitions are being received.

Following Dr. Hildreth, other presidents of ICWP have been Alice Bryan, Gladys C. Schwesinger, and Lillian Portenier. Some of the activities of the reorganized Council have been an annual meeting held concurrently with the American Psychological Association each September; a quarterly *Newsletter*; extensive correspondence between scattered members throughout the world; sending books, reports, and periodicals to colleagues and universities whose libraries have been destroyed; furnishing hospitality and entertainment for distinguished persons who seek to enlarge their understanding of other sections of the world; providing concrete personal help to colleagues in different countries; and aiding displaced or about-to-be displaced psychologists who seek employment in countries other than their own. In some instances, manuscripts have been translated into secondary language and assistance given for the publication of these in a country other than that of the author.

Moral support has been given the first International Children's Summer Village sponsored by Erasmus and Doris T. Allen in Cincinnati this June. The same sort of support will be given to Elisabeth Schliebe-Lippert who is promoting international camps for children in Europe. Both Dr. Allen and Dr. Schliebe-Lippert are members of ICWP.

Many members, but particularly Alice Bell Struthers and Lillian Portenier, have demonstrated how international mindedness can be engendered and sustained not only in elementary school children but also in youth and in graduate students. Close contact is kept with UNESCO. Several members, such as Elisabeth H. Morris, Elizabeth Woods, Margarete Sauer, Elisabeth Schliebe-Lippert, Tomiko Wada Kora, Rachel McKnight Simmons, and Claire Kears Grauel have made tours of duty to countries other than their own to further more constructive planning in educational matters. By uniting, women psychologists believe they can deal more effectively with problems that are peculiar to women. They can concentrate on areas of professional service where their sex will be an asset and not a liability.

The members of ICWP are dedicated to use their science in developing a sound international psychology; to improve relationships between professional psychologists, especially women, everywhere; and to determine how to meet the difficulties they face in trying to ful-

fill their double function as women and as psychologists.

EVELYN M. CARRINGTON

Texas State College for Women

What Should be Published in Psychological Journals?

Dr. Eysenck in the December 1950 *American Psychologist* suggests that fewer articles should be published in our journals, but that they should contain all the experimental data which led to the results. Space should be denied, he argued, to articles which are of "little scientific value because experimental conditions, faulty sampling, small number of cases, and so forth, make it impossible to establish any conclusions of general validity."

Underlying Dr. Eysenck's contention there are several assumptions. One is that all real science is quantitative and hence quantification is the only mark of a real science. This assumption, however, is gratuitous until proven otherwise. When properly applied quantification certainly is a powerful instrument of inquiry. It is, of course, desirable to use it whenever feasible. There is nothing to imply, however, that this is always the case in psychology unless we want to exclude from consideration those aspects of psychology which quantification does not fit. The second assumption seems to be that scientific papers are wholly good or wholly bad, or that there can be nothing good to a paper if its methodology is not good. Yet it seems that the history of science abounds with examples when wrong propositions allowed for the development of a methodology applied later with much advantage to better propositions; or of notions at first demonstrated through inadequate data and shrouded by obscure concepts which yet helped to reorient the thinking of an entire field. This observation incidentally holds no license for rash hypotheses—they will not be "stimulating" just because they are uncritical.

The attitude generalized in the second assumption is related to the third one which might be termed that of linear progress in science. If science presents itself eventually as a system of logically coherent reasoning, it has certainly not come about in the same direct and rational manner. More often than not the growth of theory seems to occur in hops, skips, and jumps. Intellectual progress is apparently as much of a struggle to overcome personal and social inhibitions as it is the methodical extension of propositions. Much energy has to be expended on breaking away from a traditional frame of reference, though it may already be plainly obsolete, before a new one can be adopted.

We do not know how communication functions in the social process of research and why it does not function with the encompassing rationality that Dr. Eysenck seems to anticipate. The elementals of scientific procedure may accumulate for a long time and the right

hand of science may not yet know what the left hand doeth. When and under what circumstances closure will occur cannot be predicted. Hence no attempt should be made to ordain it through editorial rules. For all we know, a lot of unsuitable statistics may have to be produced until the error becomes consequential enough for somebody else to review the whole matter and initiate change. A lot of time is wasted this way indeed, but growth of all kinds seems to be little concerned with parsimony of effort and the economy of time. Sanctions will not help to make the public intellect more perspicacious. The best we can do for the catalyzing of the scientific process is to provide better conditions for the exchange of ideas. Instead of commanding scientific acumen under pain of suppression let us make it more *likely* by replacing, whenever feasible, regimentation through communication.

For who should decide when an idea or method should not only be known by all but also accepted by all? Who should decide which papers are "of little scientific value" and what is "of little general interest and importance"? Should a considerable quantity of papers be kept from publication which have been, and still are being devoted to the study of partial aspects of behavior while disregarding that each part is affected by the conditions of the whole organism in which it is functioning? For another instance, some psychologists think that no amount of statistical elaboration will generate a new theory and that the gigantic laboriousness of factor analysis does not always correspond with the significance of its results. Should we have barred psychologists who do not share these doubts from the benefits of publication and confine them to the American Documentation Institute? It is fortunate that no psychologist who holds this or any other opinion has the power to decree that for the subject of his disapproval "a single line announcement . . . would be quite sufficient." On the contrary, it is highly desirable that papers of widely different method and theoretical persuasion be printed. I believe that our common interest—the understanding of human experience—will be better served if the standards implied in Dr. Eysenck's proposal are freely disputed rather than taken for granted. If suggestions are to be made concerning the appearance of psychological papers, they should be directed to the profession at large rather than to the APA Council or to the editors of our journals. The latter, I think, deserve our gratitude for their circumspection and broadmindedness. But if preference is to be given to anything, it should go to papers which show originality of thought and critical acuity in the fundamental job of any science, namely, the continuous revision of its basic concepts in the light of new experience.

FREDERICK WYATT

*Cushing VA Hospital and
Clark University*

The College Student as Laboratory Animal

It suffices, in some psychological circles, for obtaining a reputation for profundity and scientific rigor to point, with the requisite gloom, to the fact that a large portion of our data on human behavior and attitudes is derived from college student subjects. Indeed, there is a rather widespread belief that the use of such subjects is a second-rate dodge of lazy investigators. Because this problem is of both practical and theoretical importance, it should prove useful to subject it to analysis.

What are the special characteristics of college students as a group? They are young adults, usually between eighteen and twenty-two, with more formal education than the average of the population. They represent rather more heavily the higher income classes. Their main activity is attending college. These are their broad characteristics. Is there anything in this particular constellation which disqualifies the group as research subjects?

There is one element of validity in the deploring of the use of college student subjects. If we are interested, *on a descriptive level*, in determining the social psychological relationships of a particular group in, say, an industrial plant or in the Church hierarchy there is nothing to be gained from the study of college students. On an attitudinal level, the situation is similar. If we are interested in the attitudes of a heterogeneous population, such as of the United States, toward President Truman, it would again be improper to poll only college students. Almost any national public opinion poll, when broken down into educational levels, is apt to reveal sizable differences between educated and uneducated. Sometimes the differences are unpredicted and rather startling, as in the contrast in social class sex habits as revealed in the Kinsey report.

But there is a methodologically quite different use of college students. This is in the determination of higher-order conceptual relationships. It is on this level that the specific descriptive nature of the subjects is of only minor importance. On this level *all* human groups are representative of the human race.

By the very fact that we do psychological research most of us implicitly assume that there are certain regularities or laws of human behavior. We assume further that these laws operate for all human beings. It was within this context that the late Kurt Lewin talked of proving a law from a single case. Perhaps the most striking example in psychology of this level of research is the work of Freud, who seems to have at least touched upon broad underlying relationships on the basis of the clinical examination of a handful of Viennese of certain social classes.

It seems clear that to uncover these relationships, one may work with any group. Actually, some groups

are much more desirable than others, because the particular values of the observables or the concepts are such as to render them more accessible or the relationship more dramatic. Thus, geneticists might study the fruit fly rather than the house fly and the physicists study falling bodies *in vacuo* rather than in air. The sheer fact that a particular response can easily be elicited may determine its use. Or the choice may simply be a matter of availability.

After having established a conceptual relationship in a group, one may employ another kind of group to observe if the relationship still holds, what the curve of the relationship might look like at other values, what other variables might be involved, etc. At the present level of development of psychology, however, probably the greatest value of working with several groups is to test whether one has indeed hit upon useful concepts or not.

If the foregoing analysis has any validity, then, because there is no reason to assume that psychological laws fail to hold in the case of college students, there can be no objection to their use. Moreover, this group appears to have certain special characteristics which make it desirable. These are:

1. College students belong—at least in the broadest sense of the term—to *homo sapiens*. Because we are concerned with explaining human behavior, this is an advantage. This entire point might indeed be redundant were it not for a certain unseemly arrogance not infrequently encountered among psychologists who purportedly study human behavior by studying the white rat.

2. College students are easily available. The economy in time and energy to a busy researcher is a godsend and certainly advantageous to his productivity. The choice of college student subjects is not therefore a lazy dodge, but rather an intelligent and efficient choice. Students represent, almost uniquely in our society, that dream of the advertising man, the "captive audience" which cannot escape. A professor can distribute questionnaires to his class in a manner which insures practically a 100 per cent return, or request volunteers and be fairly sure of getting them—situations almost unheard of in other areas of life.

3. The college student is a comparatively alert, responsive, and articulate subject. He has been trained all his life to answer questions; he can introspect and report upon his responses with, perhaps, less distortion than unschooled subjects.

It would seem, therefore, that psychologists with access to college student subjects are indeed fortunate. One would be hard put to think of any other laboratory animal possessing so many advantages.

MAURICE L. FARBER
University of Connecticut

Across the Secretary's Desk

An Executive Secretary's Diary

Wednesday, January 30, 1952

- 8:26 Arrive downtown.
- 8:44 Find parking place. Almost legal. Lucky.
- 8:48 Catch breath after climbing four flights to our offices.
- 8:50 Talk with George Albee about Placement System. Large number of new Associates registering. Seven hundred or so registrants last year. More this year, what with 1,418 new members. Some seem to be just shopping around. Place around 80 or 90 per year. Costs us close to \$100 per placement. Too expensive? Service too personalized? There are various ways to make it simpler and cheaper. We will get advice from Board of Directors about possible revisions.
- 9:40 Write memo to Board of Directors enclosing George Albee's analysis of Placement System problem. We need advice.
- 9:58 Real estate agent telephones. Have we actually bought a building yet? No? He has just the place for us. Beautiful private home on a quiet street just off Connecticut Avenue. Appointment to scout it at 1:00 P.M.
- 10:00 Lorraine Bouthilet to talk about portraits in *American Psychologist*. We've run out of officers of the Association. Almost all have already appeared. How about including some other psychologists who have not held major APA office? Or should we save money by not publishing any?
- 10:05 Architect calls. Do we want him to estimate cost of air-conditioning in a property the Building Committee is reporting to the Board? Yes. Estimates are cheap.
- 10:06 Lorraine Bouthilet (continued): If we continue portraits, how do we decide whose? Past presidents? Eminent foreign psychologists? Psychologists widely recognized for their research contributions but who have not held APA offices since the portrait series was begun? Let's write to some members and ask their reactions to the idea. Maybe we should get offprints of past portraits and sell the series at cost to our members. How do we find out if there's demand? Ask around. Get informal sample.
- 10:35 Another real estate agent calls. Owner of building for which Board has authorized negotiation still refuses to name selling price. All right. Let owner wait. He will not move out until summer in any case. Building Committee is still shopping around. Have found another property our Board may like.
- 10:38 Helen Morford to talk about 1951 committee expenses. Auditors coming next week. Must have all 1951 accounts settled.
- 10:42 Long distance call from New York. Someone wants to hire a young social psychologist good in statistics. Around \$5,000 per year. Research job. Please hurry. Yessir. Referral forms in mail tomorrow if we have any registrants that fit.
- 10:45 Helen Morford (continued): Postage for mailing new directory to members comes to \$3,300. Wow! Costs so much because it couldn't be mailed under book rate—not a book, according to post office definition. Sign check.
- 10:49 John Wilson calls from National Science Foundation. Make appointment to talk tomorrow about relations between NSF and APA.
- 11:04 Cup of coffee. Wander around to interrupt people in editorial office and financial office. One new joke today.
- 11:15 Read morning mail. Four expense vouchers from Education and Training committee members. Memo about affairs of Publications Board; must get slate for editor of *Psychological Review*. Lee Cronbach wants advice of APA lawyer about some problems of Committee on Test Standards. Clyde Coombs wants permission for Psychometric Society to meet with APA in September. Steamship company wants us to arrange a moonlight cruise to Mount Vernon during APA meetings. One member of Association registers ethics complaint against another: problem for Committee on Scientific and Professional Ethics and Conduct. Gentleman in Los Angeles is intelligently worried about psychological warfare. Two members suggest we publish abstracts of PhD theses and mimeographed research reports. Wayne Dennis, incoming editor of *Bulletin*, wants us to start thinking about a two-column format for that

- journal. Letter from Millard Caldwell asking APA cooperation with Office of Civil Defense.
- 11:50 Leave with George Albee for lunch with expert on publishers' accountancy. Man astounded at complexity of our publishing business. Ten journals, ten editors, five printers, central editorial function. Thinks he can help us install better system of keeping track of costs. Thinks our charges to advertisers too low. He paid for lunch. We will talk with him some more. Maybe hire him as consultant for a couple of days.
- 1:00 Meet real estate agent to look at the building "specially designed for us." Yellow brick monstrosity. Victorian rococo splendor. Too small, too far away from things. Price not bad but no cause for excitement.
- 1:55 Call Jerry Carter, Chairman of Building Committee, to report scouting of above building and to talk about other building developments.
- 2:05 Member from Texas drops in to see what national headquarters looks like and to investigate the general employment situation.
- 2:40 Sign checks. Payday coming up tomorrow. Also printer's bills to be paid.
- 2:50 Dictate some letters. Letter to H. S. Langfeld about invitation to International Congress in 1954. Memo to Board of Directors about dates for 1954 meeting. According to poll of a sample, members clearly prefer dates around September 1 with 51 per cent in favor of holding it over Labor Day weekend, 40 per cent preferring a start on Labor Day. Board must decide so we can make commitments to New York hotels. Letter to S. S. Stevens accepting an article on NRC for the *American Psychologist*. Letter to lady who wants to put on fashion show at APA meetings. Referred her to Sherman Ross, Chairman of Local Arrangements Committee. Letter to Nicholas Hobbs about an outfit that grants doctoral degrees in psychology for \$100. Federal government is cognizant—maybe can make case on grounds of illegal interstate commerce. Letter to member explaining why new directory is late. Collaboration with National Scientific Register complicated. Whole job required extra staff. Competent short-term employees hard to find. Tried to include fall changes of address to keep book up to date. Aimed at December mailing. Failed. Very sorry. Letter to member telling him how to apply for Fellowship status. Get in touch with divisional secretary. Letter to C. M. Louttit agreeing that new APA manual of style might well be published in *Psychological Bulletin* rather than *American Psychologist*. Cheaper to print there. Also more convenient page size in reprint form.
- 3:40 Cup of warmed-over coffee. Visit around office to talk about nothing. Get invited out of back-order office. Women working.
- 3:50 Talk with Jane Hildreth about revised blank for 1952 Associate applications. How to get people to read new administrative rules adopted by Board? Refer applicants and endorsers to November 1951 *American Psychologist* or print everything on blank? If the latter, it may cost more to mail. Ask Membership Committee.
- 4:05 Write to leading sociologist asking if he will think about writing an article for a possible *American Psychologist* symposium on our ethics code. There is a sociology of ethics and maybe psychologists ought to know about it in this year of decision about ethics. Would philosophers have anything instructive to tell us? Probably.
- 4:14 Work for a while, under instructions from Lowell Kelly and the Ad Hoc Committee on Relations with the Medical Profession, on a revision of that Committee's report. After feedback from psychologists and others, the Committee is working to broaden, shorten, and clarify its report before it is distributed more widely.
- 4:49 Read and sign letters dictated yesterday.
- 5:01 Sit and breathe.
- 5:22 Head for home. Still a pile of papers on desk to deal with tomorrow.

FILLMORE H. SANFORD



QUINN MCNEMAR

Professor, Department of Psychology, Stanford University

Policy and Planning Board, American Psychological Association

President, Division on Evaluation and Measurement

Psychological Notes and News

At the University of Wisconsin 1952 Summer Session the faculty of the psychology department will include **Frank A. Beach** of Yale University and **Frank W. Finger** of the University of Virginia as visiting lecturers. In addition Professors **David A. Grant** and **Karl U. Smith**, Assistant Professors **E. Earl Baughman** and **Willard R. Thurlow**, and Instructors **Robert A. Butler**, **Hiroshi Odoi**, and **L. Benjamin Wyckoff** of the resident faculty will offer courses.

Irving C. Whittemore is on leave of absence from Boston University, where he is professor and chairman of the department of human relations in the College of Business Administration, to serve as executive secretary of the Scientific Advisory Committee on Specialized Personnel at the Selective Service System Headquarters in Washington, D. C.

L. L. Thurstone, **Charles F. Grey** Distinguished Service Professor of the University of Chicago, has accepted a position as research professor of psychology and director of the Psychometric Laboratory at the University of North Carolina. He begins his new position in April. **Thelma Gwinn Thurstone**, director of the Division of Child Study of the Chicago Board of Education, has accepted a position as professor in the School of Education at the University of North Carolina, beginning in September. She will work part time in the Psychometric Laboratory. Several research assistantships for graduate students will be available in the Psychometric Laboratory. Inquiries should be addressed to **Dr. Dorothy C. Adkins**, Chairman, Department of Psychology, The University of North Carolina, Chapel Hill, North Carolina.

First Lieutenant Albert N. Berenberg is now serving as a clinical psychologist in an Army General Hospital in Japan.

Gertrude Rand (Mrs. C. E. Ferree) was elected Honorary Fellow of the American Academy of Ophthalmology and Otolaryngology at the annual meeting of the Academy held in Chicago, October 14-19, 1951. This honor was conferred in recognition of her work in physiological optics related to ophthalmology. At present she is research associate in ophthalmology at the Institute of Ophthal-

mology, College of Physicians and Surgeons of Columbia University.

Richard S. Solomon, consulting psychologist of Dayton, Ohio, has been appointed psychological consultant to the psychiatric division of the Miami Valley Hospital, Dayton, Ohio. He has also been elected to the Board of Directors of the Montgomery County Mental Hygiene Association, and to the Board of Trustees of the Ohio Psychological Association.

P. V. Sukhatme, chief of the Statistics Branch, Food and Agriculture Organization of the United Nations, will be visiting professor of statistics at Iowa State College during the spring quarter, beginning March 27, 1952. He will give lectures in advanced survey sampling. Dr. Sukhatme was formerly statistical adviser to the Indian Council of Agricultural Research at New Delhi, India.

Dale B. Harris, **Leona Tyler**, and **Clifford T. Morgan** will be visiting professors on the Stanford University staff during the coming summer. Dr. Morgan is also teaching at Stanford during the winter and spring quarters of 1952.

Max Cooper is now chief psychologist at the Veterans Administration Hospital, Northport, New York. He was formerly with the VA Mental Hygiene Clinic in Brooklyn.

John N. Buck has resigned as chairman and member of the Virginia Examining Board for Clinical Psychologists effective January 1, 1952. **Gilbert Rich** of Roanoke, Virginia, was named to replace him as a member of the Board and **William M. Hinton**, of Washington and Lee University, was named chairman of the Board.

Daniel Starch, president of Daniel Starch and Staff, consultants in business research, was given the Paul D. Converse award at a symposium at the University of Illinois, October 26-27, 1951. This award is "in recognition of outstanding contributions to the advancement of science in marketing." *Fortune* magazine refers to this award as the "Marketing Hall of Fame" and *Sales Management* magazine describes it as "the highest honor in the marketing field." Up to the present time, this

recognition has been conferred upon fifteen persons including one other psychologist, Walter Dill Scott.

Nathaniel J. Raskin has left Hunter College to accept the position of director of research planning with the American Foundation for the Blind in New York City. He will initiate and develop the Foundation's fellowship program, which will provide support for graduate students and others engaged in research on some aspect of the adjustment, counseling, or training of the blind.

Robert B. Aledort has joined the advertising agency of Batten, Barton, Durstine & Osborne, Inc., New York, as assistant to **William A. Reynolds**, director of the Technical Research Division of the Research Department.

Fillmore H. Sanford has been appointed a member of the Board of Editors of the new *Public Health Reports*. This new journal, which is published by the Office of the Surgeon General of the Public Health Service will be concerned with professional and technical aspects of public health practice, problems of health administration, and research in these fields, with special emphasis on administrative practice, program development, and applied research.

Leo Shatin has recently been appointed chief clinical psychologist at the Brooklyn Veterans Administration Hospital in Brooklyn, New York.

Clare Wright Thompson was appointed supervisor of training on the staff of the Clinical Psychology Service, VA Hospital, Palo Alto, California in October 1951. Prior to her appointment she was in private practice in San Francisco. She is continuing to serve as a consultant at Langley Porter Clinic. More recently **Charles F. Mason**, formerly on the staff of the Illinois Institute of Juvenile Research, became a member of the staff at this hospital. He is in charge of coordinating psychological services for one unit of hospital wards.

Gerald C. Carter, associate professor of psychology, University of Illinois, assisted in the writing of supervisory training manuals in Human Relations and Job Instruction at the Air Defense Command Headquarters, Colorado Springs, Colorado, last summer. During the past few months, he has presented condensed versions of these programs and has instructed in the program for trainers

at the Air Defense Force Headquarters at Stewart Air Force Base, New York; San Francisco, California; and Kansas City, Missouri.

S. Stansfeld Sargent is spending his sabbatical leave this year in Ventura, California. Aided by a grant from the Columbia University Council for Research in Social Sciences, he is studying the values found among members of differing socioeconomic groups.

Worthington Associates, Inc., Chicago, announces the addition to its staff of **William Stephenson** as a consultant, and the appointment of **Robert F. Peck** as vice president and research director, effective January 1951.

The Wichita Guidance Center has appointed the following to internships on its staff for the current academic year: **Robert Fager**, Ohio State University; **Harold McNeely**, University of Nebraska; **Howard Jaques**, University of Tennessee; and **Leonard Rosenberg**, Indiana University.

Henry D. Rinsland, professor of education at the University of Oklahoma, is serving his second term as president of the National Council on Measurements Used in Education. In May, 1950, he appointed **Jacob Orleans**, College of the City of New York, as chairman of the committee to study the code of ethics for use of standardized tests in educational institutions. At the same time, **J. R. Gerberich**, University of Connecticut, was appointed chairman of a committee to study the minimum standards for writing and publishing standardized tests for educational use. This committee, with the committee from the American Educational Research Association, has been working with the APA Committee on Test Standards under the chairmanship of **Lee J. Cronbach**. Two other committees are completing reports of interest to APA members: one is studying the use of educational measurements in public schools and is headed by **Basil Van Schuyver**, Northeastern State College; the other, headed by **C. H. Holland** of Southwestern College, is studying the methods and materials of measurement courses in colleges.

Errors in the Convention Calendar. Anyone planning to attend the 1952 APA convention or the next meeting of the Midwestern Psychological Association should note that the information in the

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fessor René König of the University of Zurich spoke for the International Sociological Association, and Professors Leopold von Wiese and Milton Mayer for German and American scholarship, respectively. Funds for the new building were made available by the American High Commission, the city of Frankfurt, the government of Hesse, and private sources.

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Learning," W. A. Bousfield, J. M. Pickett, and D. Zeaman; "Hormonal Influences on Learning," Mortimer Applezweig; "The Role of Motivation in Learning," Kenneth W. Spence.

Members of the Advisory Panel participating in this seminar were Dewey B. Stuit, William Maucker, Milton Wexler, Quinn McNemar, and William Michael. Kenneth E. Clark, William A. Hunt, and Aaron Nadel also attended the seminar. From the Department of the Navy were John P. Flynn, John Dailey, Eugene Carstater, James Bryson, M. N. States, Marguerite Young, J. W. Macmillan, and John T. Wilson.

No formal report of the seminar will be made, but the research reported at the meetings will be published in the appropriate professional journals.

The first psychological service center in Latin America was established recently by Mexico City College (CQ), the only American-style liberal arts college in Latin America. The center is headed by R. Díaz Guerrero. Other members of the staff are Frances Benzeniste, F. Garza Garcia, Hans Hoffman, and Louis Feder. The center will be concerned with the establishment of programs of vocational counseling, guidance, and psychotherapy as well as the translation, revision, and standardization of American tests for Mexico and other Spanish-speaking countries, and the elaboration of Mexican tests.

The New Jersey Psychological Association held its midwinter meeting on February 9, at Rutgers, the State University of New Jersey.

Ten papers on original research by New Jersey psychologists were presented. Nelson G. Hanawalt acted as chairman of the program committee.

Officers of the Southern College Personnel Association for the coming year are J. Broward Culpepper, Florida State University, president; Robert S. Waldrop, Vanderbilt University, vice president; Ava Sellers, Vanderbilt University, secretary; and L. L. Love, University of Mississippi, treasurer. The next meeting will be held at Raleigh, North Carolina, with North Carolina State as the host on November 10 and 11, 1952.

The Society for Projective Techniques, New York Division, will hold its annual meeting on March 15, 1952, in the auditorium of the New York State Psychiatric Institute and Hospital, 722

West 168th Street, New York City. In the morning there will be a panel discussion on "The M Factor in Rorschach" with Samuel J. Beck, Gotthard C. Booth, Fred Brown, and Zigmunt A. Piotrowski as participants, and Samuel B. Kutash as chairman. In the afternoon Emil Oberholzer will speak on "Contents and Essentials of Rorschach's Experiment in Psychotherapy." There will also be a group of invited papers on the topic "Projective Techniques with Children Aged 6 to 10" with Leopold Bellak, Florence Halpern, and Karen Machover as participants and Edward J. Shoben, Jr., as chairman.

The Oregon Psychological Association held its first meeting in Portland on December 29, 1951. Those present represented most of the colleges and universities and the various public and private agencies in the state. The following officers were elected: William B. Singer, president; Robert W. Leeper, president-elect; and Robert D. Boyd, secretary-treasurer. Members of the Executive Board are George R. Mursell and Maurice J. Lessard.

Two workshop seminars in the Rorschach test will be held this summer at the University of Chicago. S. J. Beck will conduct both seminars. The dates are July 7-11 and July 14-18, 1952. Basic processes will be demonstrated the first week. The instruction will cover technic in administering, all scoring, processing of test records, psychological significance of the separate variables, and introduction to interpretation. The advanced seminar to be given the second week will be on the topic of acute stresses, in adults and in the adolescent range. Tests records will demonstrate conflict conditions, in which severe emotional pressures meet strenuous ego defense resistance (all with acute psychological pain), and the treatment assets in these patients. For full information, write to the Department of Psychology, University of Chicago, Chicago 37, Illinois.

Three workshops in the Rorschach method will be held this summer at Western Reserve University under the instructorship of Marguerite R. Hertz. Workshop I, "Introduction to the Rorschach method," June 2-6, will be open to qualified psychiatrists, psychologists, research workers in these fields, graduate students specializing in clinical psychology having at least one year's study or the equivalent in a recognized university and with

clinical or research experience in psychology, psychiatry, or psychiatric social work. Workshop II, June 9-13, "Intermediate course in the interpretation and clinical application of the Rorschach method," is limited to professionally trained persons in psychology, psychiatry, psychiatric social work who have had introductory courses in the Rorschach method or its equivalent. Students in Workshop I may continue with Workshop II. Workshop III, June 16-20, "Advanced course in the interpretation of Rorschach records of various personality and clinical groups," is limited to professionally trained persons in psychology, psychiatry, and psychiatric social work, who have had at least one full year of experience with the Rorschach method. Fee is \$40 per workshop; one credit per workshop may be obtained if requested upon registration and presentation of college transcript. Each workshop will be limited to 25 persons. Application and inquiries should be made prior to May 15 to Dr. Marguerite R. Hertz, Department of Psychology, Western Reserve University, Cleveland 6, Ohio.

The workshop in projective methods inaugurated last summer at the New School for Social Research, under the direction of Camilla Kemple and Florence R. Miale, will be repeated this summer. There will be four weeks of courses in the Rorschach method (introductory and three advanced levels), introductory and advanced figure-drawing analysis, taught by Karen Machover; a course in the Miale-Holsopple Sentence Completion Technique, taught by Dr. Holsopple and Mrs. Miale; and an introductory course in handwriting analysis. The dates are from June 16 through July 12, inclusive. The courses will receive graduate credit from the New School. For further information write to Richard Benjamin, 34 West 75th Street, New York 23, N. Y.

Chico State College, Chico, California, is planning its fourth annual counseling workshop under the direction of Herman J. Peters, from June 16 through July 11, 1952. The workshop will be divided into a basic and advanced counseling workshop. The basic workshop will serve as an introductory course for teachers, counselors, and administrators. The advanced workshop will be centered on students learning interviewing techniques in realistic counseling situations. Francis

P. Robinson, professor of psychology at Ohio State University, will be visiting professor in charge of the practicum in "Interviewing Techniques." For further details write to Dr. Herman J. Peters, Student Personnel Office, Chico State College, Chico, California.

A biostatistics conference has been scheduled for the first session of the 1952 summer quarter, June 16-July 23, at Iowa State College. It is sponsored by faculty members working in agriculture, biology, and statistics at Iowa State College and by the Biometric Society (ENAR). The subject matter of the five-week conference is arranged so that those who cannot attend the entire conference can advantageously come for one or more of the weeks. Iowa State College is giving the conference financial support. Publication in book form is intended.

The plan of the program is that each morning a biologist will present a problem, outline the objectives, describe techniques suitable for the experiment and analysis. A statistician will then discuss suitable experimental designs and statistical and mathematical methods for attacking the problem. These speakers will preside at a general discussion period of the same topic the same afternoon. Some graduate credit in statistics will be allowed for attendance and study during the Conference. For further information write to T. A. Bancroft, Director, Statistical Laboratory, Iowa State College, Ames, Iowa.

The Tenth Annual Session of the Summer School of Alcohol Studies will be held at Yale University, July 7 to August 1, 1952. The Summer School's educational program is designed to meet the needs of those in activities or professions requiring knowledge and understanding of alcohol beverages, their functions, and the problems associated with their use. The tenth session will differ somewhat from previous Schools in that the number of general lecture sessions will be reduced to allow more time for seminar and special interest meetings. In addition to the staff at the Center of Alcohol Studies, lecturers and seminar leaders are drawn from the University, other universities, and from nonacademic agencies concerned and experienced with problems related to alcohol beverages. The School is under the direction of Selden D. Bacon, associate professor of sociology

and director of the Center of Alcohol Studies. Requests for further information and all correspondence should be addressed to: Summer School of Alcohol Studies, Laboratory of Applied Physiology, Yale University, 52 Hillhouse Ave., New Haven, Connecticut.

A summer camp for children with more than their share of adjustment problems will be conducted this coming summer at Camp Arthur, in the Catskill Mountains of New York State. Theodore Landsman of Vanderbilt University and Ernst G. Beier of Syracuse University will direct the camp. The essential orientation of the camp will be that of client-centered, or nondirective, psychotherapy, and will include an evaluation program for the children.

Workshop and practicum training will be offered to counselors in the area of play therapy and child guidance. Graduate students in clinical psychology and related fields are invited to correspond with Dr. Ernst Beier, Box 14, University Station, Syracuse 10, New York. Counselors' salaries will be from \$100 to \$400 plus maintenance, according to experience and training.

The Fifth Annual Conference on Mental Hygiene and Problems of Exceptional Children will be held at Syracuse University, Syracuse, New York, on May 10, 1952. The theme of the meeting will be "Problems of the Adjusted Child." Co-chairmen for the conference are Ernst G. Beier and William M. Cruickshank.

The National Training Laboratory in Group Development will hold a four-week summer laboratory session at Gould Academy, Bethel, Maine, from June 22 through July 18, 1952. The purpose of the program is to sensitize leaders in all fields to the existence and nature of the dynamic forces operating in the small group. The Laboratory is sponsored by the Division of Adult Education Service of the National Education Association and the Research Center for Group Dynamics of the University of Michigan, with the cooperation of the Universities of Chicago, Illinois, and California, Ohio State University, Antioch College, Teachers College, Columbia University, and other educational institutions. Its year-round research and consultation program is supported by a grant from the Carnegie Corporation of New York. For fur-

ther information, write to the NTLGD at 1201 Sixteenth Street, N. W., Washington 6, D. C.

The Union College Character Research Project has received an announcement from the Lilly Endowment, Inc., of an additional commitment which will eventually amount to \$225,000. The Lilly Endowment has made a number of earlier appropriations, the last of which was announced in 1949. This new appropriation, which will increase the annual budget of the Project from \$100,000 a year to \$175,000 a year, will make possible the broadening of the research program of the Project. Several new members will be added to the research staff. An effort will be made to bring experts in psychology and religious education to Schenectady for periods of consultation. It is hoped, also, that the various denominational educational boards and the character building agencies can be invited to send representatives to Schenectady for a "report of progress" and a sharing of problems and methods. Ernest M. Ligon is director of the project.

The Edward L. Bernays Foundation Radio-Television Award will be presented by the American Sociological Society to the individual or group contributing the best piece of research on the effects of radio and/or television on American society. Presentation of the Award, a \$1,000 U. S. Government bond, a gift of the Foundation, will be made at the Society's annual convention in September at Atlantic City, New Jersey. Any individual or group wishing to compete for the Award must submit in duplicate a report on the research on or before June 15, 1952. Both published and unpublished studies may be submitted. Research not fully completed for which a report with preliminary findings is available may be submitted. All reports should be submitted as far in advance of the closing date as possible to the chairman of the committee of judges, Professor F. Stuart Chapin, Department of Sociology, University of Minnesota, Minneapolis 14, Minnesota.

The Institute for the Unity of Science is offering a prize of \$500 for the best essay on the theme "Mathematical Logic as a Tool of Analysis: Its Uses and Achievement in the Sciences and Philosophy." Two additional prizes of \$200 each will be given for the next best two essays. This is an international contest, open to everyone. Essays

must not exceed 25,000 words. They may be written in English, French, or German, and must be submitted before January 1, 1953. Further information on the contest may be obtained from the Institute for the Unity of Science, American Academy of Arts and Sciences, 28 Newbury Street, Boston 16, Massachusetts.

The Everett G. Brundage Memorial Fund has been established at the Wrigley Company in Chicago, where the late Dr. Brundage was active in establishing a personnel system. The 1952 award will be for the best personnel suggestion from a company employee. Those wishing to contribute to the fund may send checks, made out to Wm. Wrigley, Jr., Everett G. Brundage Memorial Fund, to Mrs. Geraldine B. Brundage, 712 North Street, Falls Church, Virginia.

Two fellowships in family life education of \$2,500 each, by the Grant Foundation of New York City, are available at Cornell University. The fellowships also include free tuition toward the PhD degree. Applicants must be men, preferably married, with a master's degree in psychology, sociology, or a related field, who show promise in family life education. Apply to the Department of Child Development and Family Relationships, Cornell University, Ithaca, N. Y.

Radcliffe College invites applications for the **Helen Putnam Fellowship for Advanced Research**, a postdoctoral resident fellowship for women, in the field of genetics or of mental health broadly defined to include such fields as clinical psychology and child development. The stipend is \$3,000 a year, with possibility of renewal. Application blanks may be obtained from the Secretary of the Graduate School, Radcliffe College, Cambridge, Massachusetts. Completed applications should be returned not later than *April 1, 1952*.

Available fellowships and assistantships for the academic year 1952-53 in the department of psychology at North Carolina State College are as follows: One teaching fellowship; one-half teaching load; stipend, \$1,200. Four research assistantships; fifteen hours' work; stipend, \$1,200 each; eight research assistantships; twelve hours' work; stipend, \$600 each, in contract research in occupational vision and accidents. Part-time work also available. Apply by June 1 to Dean, Graduate

School, North Carolina State College of Agriculture and Engineering of the University of North Carolina, Raleigh, North Carolina.

Advertisements of available internships will not be published in the *American Psychologist* until further notice. It is hoped that at some later date it will be possible to publish a complete list of agencies and institutions offering internships, together with a statement of the criteria by which a prospective intern may evaluate the internship. Until that time it is suggested that announcements of internships be sent directly to departments of psychology offering graduate training in clinical psychology.

Vacancies

Residencies and postdoctoral fellowships will be available July 1 at the University of Texas Medical Branch; stipends, \$2,000-\$3,600. Also **special summer session appointments** for university staff psychologists who would like to spend six weeks in full-time clinical work. Write to Dr. Austin Foster, Galveston Psychopathic Hospital, Galveston, Texas.

Postdoctoral residency for a one-year period beginning September 15. Candidates for the residency must hold a doctoral degree in psychology with some training and experience in the clinical field. Stipend, \$2,200. Application forms and further information may be obtained by writing the Superintendent, Dr. Winfred Overholser, St. Elizabeths Hospital, Washington, D. C. Applications for 1952-53 must be received by *April 1, 1952*.

Two-year postdoctoral residency, PhD in psychology with a minimum of one year's supervised experience in clinical psychology. Resident will be assigned to the department of adult psychiatry. During the first year the resident will receive intensive training in diagnostic testing and in the application of psychological test findings to treatment planning in all its phases. Individual supervision will be provided on an "apprenticeship" basis, the trainee working closely with his supervisor, accompanying him to section meetings, discussing with him his test assignments, his participation in section meetings, etc. Through this intimate contact with his supervisor, supplemented by supervised practice, clinical readings, seminars and conferences, the resident is expected to learn the theory and technique essential to good clinical

psychological practice. In the second year the resident will participate more actively as a member of a psychiatric section under the guidance of his supervisor. Secondary concentration in psychotherapy, research, or child psychology may be arranged, depending on the resident's personal interests and aptitudes. Stipend, \$4,100 for first year; \$4,350-\$4,800 for second year. Begin July 1, 1952. On satisfactory completion of the first year, the appointment will be renewed for the second year. Applications must be submitted *before April 15*. For information and application forms write to Mr. Martin Mayman, Director of Menninger Foundation-Topeka State Hospital-Intern Training Center, Topeka, Kansas.

Clinical psychologist, PhD, male or female, for research, diagnostic testing, psychotherapy, and some teaching in the department of psychiatry in the Medical College of the University of Utah. Prefer a person with extensive clinical training and experience. Salary, \$5,500-\$6,000. Beginning July, 1952. Apply to Dr. Ija N. Korner, Chief Psychologist, Department of Psychiatry, University of Utah, 156 Westminster Avenue, Salt Lake City, Utah.

Clinical psychologist, PhD, at least two years' full-time clinical experience with adults. Applicant must be capable of supervising psychological technicians. Duties involve diagnosis, personality evaluation, and psychotherapy. Civil service placement at a GS-11 level, salary, \$5,940. Apply to J. John Vaccaro, 1st Lt. MSC, Chief, Clinical Psychology Section, U. S. Army Hospital, Camp Atterbury, Indiana.

Clinical psychologists, PhD, either sex, under 50. To participate in state program integrating service, training, and research activities of psychiatric team members. Three openings for Chief, Psychological Services at State Mental Hospitals; one opening for Chief Psychologist at a State Mental Hygiene Clinic. Provision for part-time affiliation with the psychiatric unit of the University of Nebraska College of Medicine. Salaries, \$5,000-\$7,200, depending on qualifications. Write to Cecil L. Wittson, M.D., Director, Nebraska Psychiatric Unit, University of Nebraska College of Medicine, 40th and Poppleton Streets, Omaha 5, Nebraska.

Instructor or assistant professor in industrial psychology. PhD or all residence work completed; teaching experience desirable. Salary, \$3,600-\$4,500 for nine months. Apply to Dean L. S. McLeod, University of Tulsa, Tulsa, Oklahoma.

Child psychologist, MA required and/or clinical internship with experience; duties involve diagnostic work and counseling in child guidance center, doing research and teaching. Salary, \$3,510-\$4,110. Apply to Jerman W. Rose, M.D., Director, Oneida County Child Guidance Center, 1506 Whitesboro Street, Utica, New York.

Research biologist, PhD or equivalent, male preferred, to do research in vision, especially color vision. Prefer recent graduate with training in physiology or experimental psychology, some knowledge of mathematics and physics desirable. Salary, at least \$4,500 dependent on qualifications. Apply to Dr. Oscar W. Richards, American Optical Company, Research Laboratory, P. O. Box 137, Stamford, Connecticut.

Job analysts for domestic positions, male, 25 or older, some graduate training in industrial psychology desirable, at least one year of job analysis or closely related experience. Three vacancies with starting salaries dependent upon qualifications, beginning at \$4,525 for minimum requirements. Openings also exist in field office in Saudi Arabia with higher salaries and living allowances. Apply to Harold Heinze, Head of Recruiting Section, Arabian American Oil Company, 505 Park Avenue, New York 22, N. Y.

Editorial associate, either sex, MA required, PhD preferred; graduate training in quantitative psychology, test theory, and learning; educational or industrial experience desirable; aptitude for and interest in writing. To work in development and publication of educational and/or industrial tests and related materials; must plan, administer, and carry out detailed projects. Begin as soon as possible. Applicant should submit summary of graduate training and work experience, name of supervisor for all professional work, any evidence of writing ability, and salary expected. Salary, open. Write to Mrs. Gloria Bauer, Science Research Associates, 57 W. Grand Ave., Chicago 10, Illinois.

THE AMERICAN PSYCHOLOGIST

The Professional Journal of the American Psychological Association, Inc.

Volume 7

April, 1952

Number 4

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Subscription: \$6.00 per volume (Foreign \$6.50). Single copies, price varies according to size.

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Editor: CARROLL C. PRATT, *Princeton University*. Contains original contributions of a theoretical nature; bi-monthly.

Subscription: \$5.50 (Foreign \$6.00). Single copies, \$1.00.

GENERAL INFORMATION: SIXTIETH ANNUAL CONVENTION OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

Washington, D. C., September 1 to 6, 1952

APA COMMITTEE ON LOCAL ARRANGEMENTS

SHERMAN ROSS, *Chairman*; THELMA HUNT, J. W. STAFFORD

THIS announcement provides general information about the 1952 APA Annual Convention. A hotel reservation form and an advance registration form are also included in this issue (pp. 140 and 141). A Call for Papers was announced by the APA Convention Program Committee in the February 1952 *American Psychologist*. For all details concerning papers, symposia, and scheduling of meetings, see the February issue.

The Local Arrangements Committee has appointed several subcommittees to assist in the handling of various details of the Convention. Members interested in matters handled by the subcommittees listed below are requested to communicate directly with the appropriate chairman. On matters not covered by these subcommittees, members should write to Sherman Ross, Chairman, Committee on Local Arrangements, Department of Psychology, University of Maryland, College Park, Maryland.

Time and Place of Meetings: Monday, September 1, through Saturday, September 6, 1952 in Washington, D. C. A few special meetings may be scheduled to take place before the regular Convention. (The Program in the July issue of the *American Psychologist* will give details.) All meetings will be held either at the Statler Hotel, 16th and K Streets, N.W. or at the Mayflower Hotel, Connecticut Avenue and DeSales Street, N.W. The Program will designate the hotel in which each meeting will take place. Washington will probably be on Eastern Daylight Saving Time; Congress had not yet made this decision at the time this announcement was prepared.

Headquarters: Statler Hotel, 16th and K Streets, N.W.

Hotel Reservations: The hotel reservation form is printed on page 140 of this issue. A list is also

shown on page 140 of those hotels which have agreed to reserve rooms for members of the APA. Members expecting to attend the Convention must secure their own room reservations by filling out the form and sending it to the APA Housing Office. Information as to types of rooms available and approximate costs are shown. Additional forms may be obtained from the APA Central Office. In order to be assured of hotel space, it is strongly urged that hotel accommodations be applied for as soon as possible; since the Convention takes place during the Labor Day Holiday, the city will be crowded with tourists and hotel rooms will be scarce. Reservations will be confirmed *after July 1, 1952*.

Registration: A. W. Ayers, Department of Psychology, University of Maryland, College Park, Maryland, will be in charge of registration activities of the Convention. All members should call at the Convention registration desk at the Statler Hotel to complete their registration or to pick up Convention badges if they have registered in advance. Members are urged to *register in advance* so that they will not be delayed at the registration desk. The advance registration form appears on page 141 of this issue.

Directory of Members: Joan H. Criswell, Psychological Sciences Division, Office of Naval Research, Washington 25, D. C., will be in charge of maintaining a directory of members registered at the Convention. The data from the member's registration form will be used to provide the necessary index of registrants. A mailbox and bulletin board will also be located nearby.

Special Dinners and Luncheons: Arthur R. Laney, Jr., Assistant to the Director of Personnel, Washington Gas Light Company, 1100 H Street, N.W., Washington, D. C., will be in charge of

these special activities. Informal dinners and luncheons for interested members may also be arranged through this subcommittee at any time during the Convention. Dinners and luncheons which are to appear on the official program must be requested through H. F. Hunt, Chairman, Convention Program Committee, Department of Psychology, University of Chicago, Chicago, Illinois. It is estimated that lunches will cost at least \$3.00 per person, plus 10 per cent for gratuities, plus 2 per cent D. C. sales tax, and dinners at least \$4.75 per person, plus 10 per cent for gratuities, plus 2 per cent D. C. sales tax. Tickets will be sold at the headquarters desk in the Statler Hotel.

Exhibits: Space for exhibits will be provided on the mezzanine floor of the Statler Hotel. For information as to facilities, costs, arrangements, etc., please write to James T. O'Connor, Chairman, Subcommittee on Exhibits, c/o APA Central Office, 1515 Massachusetts Avenue, N.W., Washington 5, D. C.

Recreation and Information: Information on the available recreational activities such as sight-seeing tours, boat rides, etc., may be obtained from the APA information desk at the Convention headquarters in the Statler. This desk will also provide information on room locations of scheduled events.

Arrangements for Care of Children: Members interested in securing baby sitters during the Convention should write to Leonard W. Vaughan, Personnel Office, George Washington University, 2114 G Street, N.W., Washington, D. C., for college students who may be available on an hourly basis.

Publicity: Donald J. Lewis, Human Resources Research Project, George Washington University,

Washington 6, D. C., will be in charge of publicity for the convention. Jane D. Hildreth will serve on this subcommittee as a representative of the APA Central Office. A pressroom will be established at the Statler Hotel during the Convention.

Films, Projectors, etc.: Curtis Tuthill, Department of Psychology, George Washington University, Washington 6, D. C., will be in charge of film and projector facilities. The APA will have projection equipment available, but members presenting papers are urged to bring their own projection equipment where feasible.

Parking: Daytime parking in downtown Washington is a difficult proposition. Metered parking on an hourly basis is available on some streets. Nearby commercial garages and hotel-associated garages charge about \$1.50 for full-day parking and \$1.00 for all night parking. Traffic during the morning and evening rush hours is congested. Public transportation and taxi service are relatively inexpensive and readily available.

DEADLINES

April 22—For receipt of requests for business meetings of divisions, boards, etc. by H. F. Hunt, Chairman, APA Program Committee.

April 22—For receipt of requests for special meetings, luncheons, dinners, etc. by H. F. Hunt, Chairman, APA Program Committee.

April 22—For receipt of requests for preconvention sessions by H. F. Hunt, Chairman, APA Program Committee.

August 15—For receipt of room reservations by the APA Housing Bureau, 204 Evening Star Building, Washington 4, D. C.

THE NAS-NRC AND PSYCHOLOGY

S. S. STEVENS

Harvard University

PSYCHOLOGY has a stake in the National Academy of Sciences and in the National Research Council. What this stake amounts to is not too well understood, perhaps, but that is partly because American science has spawned more societies, academies, councils, and associations than the typical scientist cares to keep track of. We have had a pot full of alphabet soup, both within the government and without, and it is a very reasonable question to ask what is the NAS?—and what is the NRC? Are they just another pair of government agencies, or are they something different? And what have they to do with psychology? Perhaps a little history will help to answer these questions.

There was no such thing as an APA in 1863 when Lincoln approved the Act of Congress that established the National Academy of Sciences. Psychology was yet to be hatched from the nest of philosophy. But there was a war on in 1863. Lee's Confederates were preparing to invade Pennsylvania. Grant's Union Forces were stalled before Vicksburg. A nation in peril had to mobilize its resources—science included.

As happens in such circumstances, the initiative came from the scientists themselves, although there was a timely assist from the Navy Department (3). It appears that the government was being flooded with plans, proposals, and new inventions that needed the scrutiny of a scientific jury, and in order to cope with this enthusiastic tide and provide guidance in other "matters of science and art" the Navy created a "Commission" consisting initially of Joseph Henry, godfather to inductance whose unit is the henry, A. D. Bache, the physicist Superintendent of the U. S. Coast Survey, and Commodore C. H. Davis, Chief of the Navy's Bureau of Navigation.

This Commission was not the Academy precisely, but the enthusiasm that created the Commission led some of the same small band of scientists to take the bolder step of forthrightly requesting the Congress to incorporate a National Academy—an institution that had long been talked about and

hoped for. A wise advocate, Senator Wilson of Massachusetts, introduced the bill and events moved fast. All in the single day of March 3, 1863, the bill passed both Houses of Congress and was signed by President Lincoln. Fifty men of science were named in the act, and they and their "successors duly chosen" were "declared to be a body corporate." Thus was the NAS born. It was told to make its own organization and rules, to fill its vacancies up to the number fifty, and to report its doings to Congress. It was told further that it should, "whenever called upon by any department of the Government, investigate, examine, experiment, and report upon any subject of science or art"—actual expenses to be paid by the asker, but no "compensation" to fall to the Academy.

Maybe science didn't win the War Between the States, but we have evidence that it helped. Maybe the superior resources of the North made the outcome inevitable, despite Southern valor, but it is clear that the men of the Academy turned their talents to military and naval problems with the proper zeal of patriots. Action was had through a system of special committees on which non-members of the Academy were also invited to serve. In his first annual report as President of the Academy, Professor Bache was able to say that the members had "put their time and talents at the disposal of the country in no small or stinted measure, freely, fully, by the binding authority of an oath; asking no compensation therefor but the consciousness of contributing to judicious action by the government on matters of science" (3, p. 203).

Judicious action on matters of science, especially where matters of science relate to public policy, continued to be a pet concern of the Academy throughout its early years. There were, for example, committees on weights and measures that helped get the metric system legalized, committees on counterfeiting, gauging distilled spirits, tariff classifications, morphine, geodetic surveys, definitions of electrical units, restoration of the Declaration of Independence, silk culture, rational forest policy, and on methods of conducting scientific

work by the government. Almost fifty committees were set up at government request during the first three decades of the Academy's existence. The business of handing out free advice got off to a good start.

But during its early decades the Academy did not always prosper as its devotees thought it should. For one thing, it was small; for another, it was poor. Proud as it might be of its role of scientific adviser to the Government, it could not get rich by peddling free advice, and to implement its many ambitious aims it had only the annual dues paid in by its members. Funds and bequests for special purposes came to it in time, but for such simple and essential business as the systematic publication of the scientific papers presented at its meetings there was seldom the wherewithal. Unlike the official academies of many of the older countries, the NAS was unsubsidized, and it was consequently free—free to starve to death or to survive on its merits. In 1884 it got an official hunting license from Congress in the form of an authorization to receive and hold donations and bequests, but not until the Carnegie endowment came along in 1919 was there a financial cushion firm enough to support the body Academic in respectable style.

Until 1870 the membership was limited by statute to a mere fifty—for all the sciences in the whole United States. In that year the Congress removed this limitation and there followed an influx of new blood which pepped up the annual meetings and started the Academy on a path of steady growth toward its present membership of nearly 500. This growth has been orderly and subject to careful cultivation under an elaborate system of election. If, as some have quipped, the Academy exists only to embalm new names upon its roll, it can at least be argued that the job has been done conscientiously, albeit with the inevitable mistakes and oversights that characterize human judgments. The spirit of the business was expressed in the farewell address of the second president, Joseph Henry, who cautioned the Academy that "great care must be exercised in the selection of its members. It must not be forgotten for a moment," he said, "that the basis of selection is actual scientific labor in the way of original research. . . . It is not social position, popularity, extended authorship, or success as an instructor in science, which entitles to membership, but actual new discoveries . . ." (3, p. 47).

And so the Academy went along, adding carefully to its membership and becoming a highly distinguished but a curiously uninfluential body. Most of the public, scientific and otherwise, seemed unaware of the Academy's existence. The typical citizen was probably more informed about a comparable institution, the Royal Society of London whose Fellows put F.R.S. after their names, than he was about his own National Academy.

But suddenly in 1914 Germany marched against France, and within a year and a half America's neutrality was becoming a hope more and more forlorn. Then at the meeting of the Academy in the spring of 1916, George Hale, the astronomer, rose to tender a resolution that the Academy offer its resources to the President of the United States in the interest of preparedness. Approval was unanimous, and a committee was dispatched to the White House where President Wilson accepted the Academy's offer and bade it proceed with a plan. The plan that evolved (1) called for a National Research Council which would be at once an agency of the Academy and a mechanism of cooperation among all existing scientific and engineering organizations. Wilson was delighted. "I want to tell you," he wrote later, "with what gratification I have received the preliminary report of the National Research Council, which was formed at my request under the National Academy of Sciences."

This new arm of the Academy, the NRC, had muscle where it counted, namely, at the "operating level." It was as representative of all aspects of American science as human wisdom could make it. It drew on talents wherever they existed. By-passing the meticulous election procedure of the Academy it called upon men and organizations for service wherever service was in order. Its membership was not merely distinguished, it was active. From the outset the NRC worked hand in glove with various military and other governmental agencies. It set up a Washington office at 1329 E Street N.W. which became a hive of activity and a control point for the efforts of numerous committees and working groups (2). A scientific mission was dispatched to Europe, new research facilities were brought into being, especially in the field of underwater sound, conferences were organized, information was coordinated—in short, all the standard activities of science at war were evident in the NRC's early bustle and turmoil. Maybe science didn't win that war either, but it certainly helped.

In the patriotism of the moment many discordant pullings and haulings were temporarily suppressed, but it must not be thought that all participants had the same idea of what the NRC was or should be. It became in fact many things to many people. Nevertheless, the NRC was a viable sprout on the taproot of the "stuffy" old Academy, and even before the Armistice there flamed up a spontaneous enthusiasm for its continuation as a permanent peacetime organization.

Two things were needed: official approval and money to make it work. Elihu Root, friend and counselor, urged the NRC to seek permanent status by requesting an executive order from President Wilson in order to obviate the need of Congressional action. A draft of such an order was drawn up and submitted to the White House, but it met with opposition from certain of the President's advisers. Other advisers saw it differently, however, particularly Colonel House, and the executive order, edited and revised by Wilson, was finally signed on May 11, 1918. It requested the NAS to perpetuate the NRC, and it spelled out a list of lofty aims and purposes to be fulfilled.

Money, of course, was harder to come by. Appeal was made to the Carnegie Corporation, which has done so many wise things for science and learning. This Corporation finally voted a gift that, in terms of its far-reaching effects, ranks perhaps as the most important ever made to science in America. The sum of \$5,000,000 was provided for a building and an endowment, on condition that funds be raised from other sources to purchase a suitable plot of ground. By means of some energetic hat-passing the \$185,000 for the real estate was gotten, mostly in \$10,000 lumps from some distinguished friends of science, and the prospect of a home and an endowment was secure. The home stands today at 2101 Constitution Avenue—an architectural gem and an enduring monument to American science. Of course, the far-flung activities of the Academy and its Research Council have long since overflowed this spacious building, and 38,000 square feet of additional floor space have had to be rented in other parts of Washington. In fact, the *annual* budget covering the NRC's activities is bigger now than the total of the Carnegie endowment gift. We seldom plan large enough for American growth.

So much for thumbnail history. What we learn from it is that the NAS and the NRC, both born

in the travail of national emergencies, have outlived the crises that created them and have flourished as instruments of service to science and citizens alike. The inventory of what goes on in any one year is duly recorded in the Annual Report submitted to Congress. The list of activities is long. Some of them are trivial, some are momentous, and some of them represent the kind of busy-work involved in keeping the scientific house in order. Almost every scientist reader will find something in the Report of concern to himself or his work.

It is not easy to say what activity of the Academy-Council is the most important, for here is a case where the whole is clearly more than the sum of its parts. In this organization we have a peculiarly flexible mechanism for advising government, for sparking new enterprises, for troubleshooting in emergencies, for coordinating research programs, for maintaining interdisciplinary boards, for surveying scientific personnel, and for providing all sorts of scientific get-togethers. These many facets make the NAS-NRC mean different things to different people.

If, however, we were to try to single out the one most important accomplishment to date, we would be forced, I think, to nominate the NRC Fellowship program. Launched in 1918 and supported by large annual grants from the Rockefeller Foundation, this program has given a year or more of freedom for concentrated research to some 1300 post-PhD's in the natural and medical sciences. Approximately 100 of these Fellows have been psychologists. Furthermore, by encouraging the Fellows to do their research at an *American* university, the program has led indirectly to an expansion and improvement of our research centers themselves. And following the example of this original program, similar fellowship plans have been set up by other agencies, private and public. The latest program of this sort is the one recently announced by the National Science Foundation. Like many other givers of fellowships, it too will make use of the NRC machinery for selecting the recipients. Millikan (2) had good reason to call the NRC Fellowship plan "the most effective agency in the scientific development of American life and civilization that has appeared on the American scene in my lifetime."

As might be expected, the onset of World War II

found the NRC with its attention centered on matters of defense. Before the government organized its own Office of Scientific Research and Development, the NRC provided the mechanism for some of the early contractual relations between the government and the universities. The fruitfulness of this program of research under government contract is well known. It may be wondered why the NRC did not keep on as the contractual intermediary between Uncle Sam and the research laboratories and thereby make the OSRD unnecessary. Aside from the fact that the NRC would have burst its seams in the process, a government agency is the proper device for operating these research contracts, and the NRC is not a government agency. In order to start the wheels turning the NRC served as a prime contractor on occasion and let subcontracts to other institutions, but the operation of vast contracts is not a proper undertaking for the Council. The operation of contracts builds operating empires, and it is a distracting business. If the NRC got bogged down in it, we would then need a new organization to serve as catalyzer, reinforcer, and release mechanism for the new, unusual, and unforeseen developments that scientists will inevitably think up.

Turning back now to the pages of earlier history, we find that psychology got its first recognition from the National Academy in 1901 in the election of the irrepressible J. McKeen Cattell, editor, executive, and man of influence. Cattell was certainly more than a psychologist, and his election to membership may have been in acknowledgment of his other attainments. It may even be that he was elected in spite of being a psychologist. Anyhow, the ice was broken and the election of other psychologists followed in due course: James in 1903, Royce in 1906, Dewey in 1910. Although the Academy had from time to time divided itself into classes and sections according to subject matter, there was no recognition of psychology until 1911 when the standing committee on anthropology, dating from 1899, was relabeled "Anthropology and Psychology." This committee, later called a section, persisted until 1948 when both anthropology and psychology were made into separate sections. By that time the psychologists outnumbered the anthropologists both within the Academy and without. Up to now, a total of 34 psychologists have been elected to the Academy, as follows:

1901	Cattell	.	.
.	.	.	.
1903	James	1928	Stratton; Terman
.	.	.	.
.	.	1930	Lashley
1906	Royce	1931	Washburn
.	.	1932	Boring
.	.	1933	Miles
.	.	.	.
1910	Dewey	1935	Hunter
.	.	1936	Hull
.	.	1937	Tolman
.	.	1938	Thurstone
.	.	.	.
1915	Hall	1940	Wever
.	.	.	.
1917	Thorndike	.	.
.	.	1943	Carmichael; Stone
.	.	.	.
1920	Angell	.	.
1921	Woodworth	1946	Graham; Stevens
1922	Seashore	1947	Gesell; Köhler
1923	Yerkes	1948	Hilgard; Richter
1924	Dodge	1949	Beach
1925	Pillsbury	1950	Skinner
.	.	1951	Harlow

Psychology, with 23 active members, is still a small section compared with chemistry and physics, each of which has more than sixty members. But then, psychology is a natural science only in part, and its Academy members have been recruited almost entirely from the biotropic, experimental wing of the discipline. The center of gravity of the Academy is still located close to the laboratory sciences.

In the NRC, on the other hand, where the APA is one of the member societies of the Council, psychologists of all persuasions have been active from the start. Early in 1917 the NRC created a Psychology Committee (4) and charged it with numerous wartime duties, many of which, as a matter of fact, had been thought up and set in motion by the Council of the APA. Under the chairmanship of R. M. Yerkes the Psychology Committee gave such a good account of itself that there was no question about psychology's having a place in the permanent postwar structure of the Council. It was the intelligence testing program, with its famous Army Alpha, that sold psychology in World War I, although solid but less spectacular achievements were made in other quarters, for example, in personnel classification and in what Raymond Dodge, chairman of the first NRC Committee on Problems of Vision, called "the new problems of

human engineering which modern war occasioned." Dodge found that the solving of many of these scientific problems was relatively easy but that selling the solutions to the military was something else again. These facts of nature were to become familiar to many psychologists in World War II.

In 1919 the NRC placed anthropology and psychology together in a single Division, and Walter V. Bingham was elected first chairman. It may seem curious that, whereas in the Academy itself psychology and anthropology started out as a joint section but ended up separate, in the NRC it was the other way around, and we still have a single Division of Anthropology and Psychology. There are good reasons, however, for this illogicality. The simple fact is that one principal business of a Section of the Academy is the nomination of new members, and for this purpose it is disadvantageous to join two groups that do not know each other intimately and personally. On the other hand, a Division of the NRC is an instrument of administrative cooperation—a device for dealing with problems that are intersociety and interdisciplinary, problems that are left over after the specialists have formed their groups, problems that are created by the mere fact of specialization. Anthropology and psychology together are able to constitute a Division large enough to justify an office and a permanent staff. This staff at the present consists of an Executive Secretary, Dr. William N. Fenton, formerly of the Smithsonian Institution, a secretary, Mrs. Dorothy McLean, and an office clerk, Mr. Donald Nearman.

Having a full-time Executive Secretary is something new for this Division. Most other divisions have them and find them indispensable to the proper conduct of business, but until January 1, 1952, the Division of Anthropology and Psychology had struggled along for most of its life with the services of a part-time chairman and a secretary. How this has worked out was aptly described back in 1927 in some off-the-cuff remarks by the anthropologist A. V. Kidder, then chairman. "Dr. Dodge," said Kidder, "says that all psychologists seem pretty hopeful about the Division's work except those who have been chairman. I believe that all chairmen go through four periods: (1) bewilderment, (2) a great burst of energy, (3) discouragement, and (4) a return to normalcy. The greatest problem of the chairman is that he is given a large handsome machine and no gas to run it."

Gas is still not as free as air and water, but we now have an Executive Secretary to keep his foot on the throttle for the efficient combustion of whatever fuel is available. The Division ought to start popping on all cylinders.

In the meantime most psychologists who have bothered to consult the record will take a modest pride in the past accomplishments of their NRC Division, but they will probably temper their pride with a realization that opportunity has nearly always outrun accomplishment. The machinery is there for the implementation of good purposes, but it sometimes stands idle. Of course, it sometimes ought to stand idle, for otherwise it would be active for the sake of mere activity; and if it could not relax when there was little to do, it could probably not muster itself for emergencies.

The chairmanship of the Division has tended to go alternately to the two professions. An anthropologist traditionally succeeds a psychologist, and when one of these is chairman the other is vice-chairman. Terms of office have varied from one year to four. At present a three-year hitch is supposed to be standard for the chairman, and the vice-chairman gets appointed annually.

These are the past incumbents:

	Chairmen	Vice-Chairmen
1919-20	W. V. Bingham	—
20-21	Clark Wissler	C. E. Seashore
21-22	C. E. Seashore	A. L. Kroeber
22-23	Raymond Dodge	A. L. Kroeber
23-24	Albert E. Jenks	R. S. Woodworth
24-25	R. S. Woodworth	A. V. Kidder
25-26	G. M. Stratton	A. V. Kidder
26-27	A. V. Kidder	Knight Dunlap
27-29	Knight Dunlap	Fay-Cooper Cole
29-30	Fay-Cooper Cole	Madison Bentley
30-31	Madison Bentley	Robert H. Lowie
31-32	Robert H. Lowie	A. T. Poffenberger
32-33	A. T. Poffenberger	Ralph Linton
33-34	A. T. Poffenberger	Edward Sapir
34-36	Edward Sapir	Walter S. Hunter
36-37	Walter S. Hunter	John W. Swanton
37-38	Walter S. Hunter	Carl E. Guthe
38-39	Carl E. Guthe	H. M. Johnson
39-40	Carl E. Guthe	H. E. Garrett
40-41	Carl E. Guthe	Elmer Culler
41-42	Leonard Carmichael	Carl E. Guthe
42-43	Leonard Carmichael	F. M. Setzler
43-45	Leonard Carmichael	Ralph Linton
45-46	Walter R. Miles	F. H. H. Roberts, Jr.
46-47	A. I. Hallowell	C. W. Bray
47-49	A. I. Hallowell	G. K. Bennett
49-50	S. S. Stevens	Charles Wagley
50-52	S. S. Stevens	Loren C. Eiseley

Although there are a dozen active committees in the Division, a proper assessment of the importance to psychology of the NRC would require us to look beyond the Division proper. The Divisional doings are recorded annually along with the reports of APA committees in one of the fatter issues of the *American Psychologist*, but beyond what is there reported there are, among the 400 committees of the NRC, several activities that concern psychology. Among them are the fellowship programs and the Fulbright grants. Then there is the work of the Committee on Undersea Warfare for which a group of psychologists recently prepared a volume on "Human Factors." Under the Office of Scientific Personnel there are compiled scientific rosters, and constant efforts are made to ensure an enlightened treatment of scientific manpower by the government. As an interdivisional activity there has been newly formed a Committee on Highway Safety Research, which is highly psychological in outlook. The same is true of the older Armed Forces-NRC Vision Committee. The work of several of the committees under the Division of Medical Sciences touches upon the interests of psychologists, especially of clinical psychologists. And the Committee on Research in Problems of Sex, of which Yerkes was chairman for 26 years, continues

to sponsor much besides Kinsey that is basically psychological research.

That is by no means all, but it is enough to point up the ramifications of psychology in the organization. The National Academy of Sciences with its National Research Council is a complex, changing, adapting, evolving organism out of which almost anything can be made that suits the good ends of science. Adviser to government and coordinator of American research, it is as flexible as needs are various. It maintains no laboratories and eschews routine operations that tie its hands and make forward commitments of its facilities. It sloughs off as easily as it takes on, and it accomplishes its measure of good because scientists are willing to join hands and give freely of their time and energy.

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AGE, INCOME, AND PROFESSIONAL CHARACTERISTICS OF MEMBERS OF THE APA'S DIVISION OF COUNSELING AND GUIDANCE

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STATE psychological associations, manpower survey teams, and other groups occasionally raise specific questions concerning the professional activities and membership characteristics of the APA's Division of Counseling and Guidance. In order to supply accurate information for answering such inquiries, the Executive Committee of Division 17 in the autumn of 1950 authorized an omnibus questionnaire which was to be sent out to all members of Division 17. The data presented in this summary are for replies received between May 15 and July 1, 1951.

A variety of devices was used to obtain as complete a return as possible. Notices of the forthcoming questionnaire were placed in the Division 17 *Counseling News and Views*, colored paper was used to attract attention to the questionnaire itself, a personal appeal from the Division's president was included in the mailing, and stamped, self-addressed return envelopes were enclosed. Follow-up letters, of course, were not possible because the replies were anonymous. The results were fairly satisfactory; of 644 questionnaires sent out, 454 or 70 per cent were returned in sufficiently complete form for tabulation.

Little can be said concerning the characteristics of the 30 per cent who did not reply. Proportionately more divisional Associates than Fellows failed to fill out their questionnaires; hence our sample may be somewhat biased toward those members

who feel a closer professional identification with the Division. The 1950 APA *Directory* lists 27 per cent of Division 17's members as *Fellows* and 73 per cent as *Associates*; yet 35 per cent of the questionnaire returns were from *Fellows* and 65 per cent from *Associates*. If it is assumed that Fellow status reflects a deeper professional interest, the greater proportional response is only to be expected. Curiously, 136 of the 454 members who returned their forms failed to indicate whether they were *Associates* or *Fellows*. Another omission, and one more likely to intrigue the psychoanalytically oriented among our professional brethren, is that 25 persons or nearly 5 per cent of those responding did not indicate whether they were *male* or *female*.

TABLE 1
Age, sex and membership status

Sex and Status	N*	Range in Years	Q ₁	Median Age	Q ₃
Male					
Fellow	91	30-70	41.5	45.4	49.1
Associate	156	25-70	30.4	37.9	43.1
Status unknown	100	25-65	36.2	40.7	47.1
Female					
Fellow	14	40-65	45.7	49.5	56.9
Associate	36	25-65	36.0	43.5	48.5
Status unknown	27	25-75	39.4	45.5	53.8
No sex given					
Fellow	4	40-55	44.5	47.5	49.5
Associate	12	25-50	31.7	36.7	42.5
Status unknown	9	30-65	40.4	42.6	49.4
Total group	449	25-75	36.1	41.7	47.8

* The number will vary in the tables because of occasional omissions in otherwise complete questionnaires.

Scrutiny of Table 1 reveals that Fellows of the Division are older than Associates. This is to be expected since more training and experience are required for the former. Female members, it will be noted, average four to five years older than their

¹ The subcommittee was composed of the four authors of this article. Valuable aid in revising the questionnaire was received from Drs. C. Gilbert Wrenn, Donald E. Super, Mitchell Dreese, and Edward S. Bordin. A brief report of the questionnaire findings was presented before a Division 17 symposium at the 1951 APA Annual Convention in Chicago.

male counterparts. This difference is due in part to the tendency of female members to remain "in grade" as Associates. If data obtained in 1948 may be applied to the present situation, female members of the Division have proportionately fewer doctoral degrees than the males. Thus, there is less tendency for older females to move out of the Associate and into the Fellow category where a doctoral degree is virtually mandatory. By contrast, male Associates tend to move up to Fellow status when they have acquired five or six years of professional experience, thereby lowering the mean age of Associates by their departure and also lowering the mean age of Fellows by their arrival.

Despite the fact that females in the Division have lived about five years longer than the males, it will be noted in Table 2 that they have about the same number of years of professional experience as males. In some cases, tours of duty as housewives markedly reduced the total years of professional experience. In other instances, female members were steadily employed but, at times, in nonpsychological positions. There are probably other reasons, as yet undetermined, which would amplify the explanation.

TABLE 2

Years of professional experience

Sex and Status	N	Range in Years	Q ₁	Median	Q ₃
Male					
Fellow	91	5-40	12.7	17.6	22.7
Associate	152	0-35	6.6	9.6	13.5
Status unknown	98	0-35	7.9	11.9	16.5
Female					
Fellow	13	10-40	14.1	17.5	28.8
Associate	34	0-30	6.8	9.2	14.0
Status unknown	24	0-35	4.5	6.7	19.0
No sex given					
Fellow	4	15-25	17.5	20.0	22.5
Associate	12	0-25	6.7	13.4	17.5
Status unknown	9	5-30	10.3	13.2	21.9
Total group	437	0-40	7.8	12.1	17.7

While medians are presented in the tables, means were also computed. These means were very close to the medians for all parts of Tables 1 and 2, and the total group means for these tables were identical to the medians. Such was not the case in Table 3 which summarizes total annual income. Because of a number of high incomes, the mean was

substantially higher than the median in each case. The median total annual income of all Division 17 members, for example, was \$6,988 while the mean was \$7,341. In order to avoid the influence of extreme cases, the median was used in the present analysis.

TABLE 3
Total annual income

Sex and Status	N	Range in Dollars	Q ₁	Median	Q ₃
Male					
Fellow	92	4,500-26,000	7,166.50	8,999.50	10,908.50
Associate	151	3,500-20,000	5,575.10	6,497.50	7,912.00
Status unknown	95	4,500-30,000	5,916.20	6,864.90	8,249.50
Female					
Fellow	13	5,250-9,250	6,041.00	6,749.50	8,437.00
Associate	33	2,500-15,500	3,905.80	5,135.90	5,885.90
Status unknown	20	3,250-10,250	4,499.50	5,499.50	7,166.20
No sex given					
Fellow	3	6,000-12,000	8,249.25	9,749.75	10,874.40
Associate	11	3,000-12,000	4,919.35	6,749.75	8,000.35
Status unknown	9	3,000-21,000	4,679.45	7,499.50	14,352.75
Total group	427	2,500-30,000	5,309.25	6,987.65	8,789.05

As shown in Table 3, Fellows of the Division are more amply compensated for their professional services than Associates. This is not surprising since, as indicated previously, Fellows are possessed of more professional training and experience. Also, as one would anticipate, experience and income are fairly closely related. While this proportionate rise of income with experience is characteristic of both men and women in the Division, males earn on the average from \$1,400 to \$2,200 more in absolute income. This is true despite the fact that females as a group are older and have as much professional experience as males. Further, the gap widens with increasing age. At age 38 the males average approximately \$1,100 more annually than the females, but by age 47 this difference is nearly \$2,500. Seven per cent of those who responded to the questionnaire had total annual incomes of \$12,000 or more, and virtually all of these were males.

At first glance these data suggest that salary discrimination in favor of males is present. While some slight discrimination may exist, it is not nearly as marked as the total income figures of

Table 3 indicate. The original questionnaire provided for a breakdown between regular salary, royalties, and additional income from summer teaching, consulting fees, speeches, etc. These extra earnings swell the male total income disproportionately. To take a specific example, the *mean total* annual income of male Fellows is \$9,312 annually while that of female Fellows is \$6,537, a difference of \$2,776. However the *mean regular* annual salary is \$7,630 for male Fellows and \$6,430 for their female equivalents, a difference of \$1,200 in regular salary. Thus, \$1,576 of the \$2,776 male-female total pay differential is due to extra income from various outside sources as books, tests, speeches, and the like. While the questionnaire did not provide for information on marital status or family responsibilities, it is likely that heavier family responsibilities encourage males to seek extra income. It is also possible that these outside sources of extra income account not only for \$1,576 of the male-female pay differential but also for a portion of the remaining \$1,200 not accounted for. That is, the authorship of books and tests, the delivering of speeches, and engaging in consulting work may augment professional status to the point where an increase in regular salary may be granted.

Of 454 respondents, 151 or 33 per cent indicated that they were diplomates of the American Board of Examiners in Professional Psychology. Sixty-four per cent of the diplomas held by Division 17 members were in counseling and guidance, 24 per cent were in clinical and abnormal psychol-

ogy, and 10 per cent in industrial psychology. Two of the diplomates failed to indicate their specialty.

Fifty-two per cent of those replying to the questionnaire listed themselves as either veterans or current members of the United States armed forces. Four of the veterans were female and 233 were male. Sixty-seven served in the enlisted ranks while 170 were commissioned officers, 4 of whom were naval captains or full colonels.

Forty-one per cent or 187 of the Division's members who returned questionnaires reported that they devoted five or more hours each week to research. The commonest method of financing this research was by squeezing time from the regular office budget, e.g., using the clerks and stenographers as research assistants. Fifty-three of the 187 persons doing research used office time, 35 had a regular research budget, and 15 had government contracts. The others had varied sources of financial aid.

In answer to the question, "Are your chief research interests taken care of by other APA divisions?" 212 respondents said "no," 139 said "yes," and 103 did not reply to the item. Those who answered *yes* to the question most often listed the Division of Clinical and Abnormal Psychology as best caring for their research interests. Seventy-one of the 454 persons who returned a questionnaire presented a paper at either the 1949 or the 1950 APA Annual Convention. Twenty-six of these papers were read before Division 17 sessions while 43 were presented at other divisional meetings.

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Comment

Measuring the Success of APA Meetings

The "Summary Report of the 1951 Annual Meeting" (*American Psychologist*, November, 1951) shows that the convention was a success—with attendance, number of meetings, etc. used as criteria. The work of the committees also was successful, using as a criterion their explicit or implicit understanding of their proper functions. This is satisfying as far as it goes, but we are in the habit of asking ourselves the question, "What is an adequate criterion?" and I suspect that a number of APA members would doubt that the above criteria are adequate.

Perhaps we need some "feedback" from ourselves on how and where the convention was worth while, and to how many people. Considering the time and expense involved for the 4,000 members attending, the cost of examining membership goals and measuring convention success in terms of these goals would seem to be justified. Presumably our objectives are somewhat different from those of the convention-goers of many years ago who set up the procedure we follow today. Yet there has been little or no fundamental change in the way conventions are conducted, despite the past and expected growth of the membership.

If a systematic survey of member goals and ideas concerning conventions were conducted, the association would presumably have a more adequate criterion to measure success. And it would permit modifying future content and procedure to make the meetings of more value to more people. With no intention of proposing what the scope of such a survey should be, five items are mentioned below to suggest possible areas if a study is made.

1. *The papers themselves.* How many papers do average convention-goers hear, and what do they gain from the listening? Should the whole procedure of "reading papers" be examined to see if the benefits derived from it justify the proportion of time spent? Or should the methods of presenting them be considered, in terms of the best techniques of education and training that have been developed?

We might ask why papers are submitted in the first place. If one reason is to get one's name in the program and to be seen by possible future employers, is this the best way to do it?

2. *Discussion groups.* What we know about learning, participation, group dynamics, etc. suggests that small group discussions could be quite beneficial. Assuming, of course, that they are handled by people with the necessary skill, and composed of people with common interests and problems, small groups could provide an excellent opportunity to get acquainted, and an

opportunity for more people to take an active part. Perhaps there could be several groups scheduled for each Division, with two or three or more of the senior members assigned to each group.

3. *Badges.* The chief value of the badges apparently is to give a person a chance to find out who someone is without asking him. The small type leads to the "furtive glance" or the "forthright peer," with some embarrassment attached. This suggests larger type and raises the question of the value of having the dates and "American Psychological Association" printed on the badges. Would the membership prefer to have the individual's name in larger type, with the institution perhaps in smaller type, and nothing else? Perhaps it would be desirable to have different colors to indicate different Divisions, or geographical areas, or type of institution.

4. *Social affairs.* Many people have suggested that one of the greatest values of conventions is the opportunity to meet people at informal, small parties. Others, because they are virtual strangers, are not able to benefit in this way. Is enough of the membership interested to justify working out a plan that would give everyone something to do in the evenings and to meet some of the people he would like to meet?

5. *Public relations.* After the last convention a newspaper reporter complained bitterly to me about the chore of getting a feature article out of our conventions—and others like them. He said he listened to dozens of papers, and not one had news value. Of course, papers aren't prepared for reporters, but perhaps we are missing an opportunity for good publicity—which, it appears, we need.

Have possibilities for radio and television programs been investigated? Presumably we have experts on educational psychology, advertising, visual education, etc. in our midst. Local community interest might be worth developing, including local schools, civic groups, and related professions, as well as the general public. This might be done by use of exhibits, movies, demonstrations, etc. conducted on a regular schedule in one of the ballrooms.

The above remarks are not offered as a program of activity, either collectively or individually, but only as possibilities or questions. First we need to know whether the membership is interested in analyzing our conventions, determining the criterion, and measuring the success. If deficiencies are felt, and modifications suggested, then the difficulties can be considered, and undoubtedly resolved.

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The Psychologist in Private Practice and the Good Profession

Dr. Fillmore H. Sanford, in his "Annual Report of the Executive Secretary: 1951," has done a much-needed job of listing criteria for a good psychological profession. Although some of his sixteen points may be debatable, and although several other points in this connection could doubtlessly be made, the writer is in quite close agreement with Dr. Sanford, and is willing to accept his criteria until better ones come along.

In explaining and expounding upon his main criteria, however, Dr. Sanford makes several statements and implications concerning the shortcomings of psychologists who are now in private practice, and particularly of practicing clinicians. Although he may not have intended to attack psychologists in private practice, many of his points may be interpreted, both by the practitioners themselves and by other psychologists, as constituting such an attack. Because such an interpretation is likely to occur, it is important to present certain facts about the private practice of psychology, and particularly about the private practice of clinical psychology. For while some of Dr. Sanford's points may just as well apply to industrial consultants, vocational guidance counselors, and other psychological practitioners, the writer only feels qualified to discuss these points as they specifically may apply to clinicians.

Dr. Sanford, in effect, notes that many clinical psychologists in private practice are (1) doing relatively little research; (2) driving around in "a Cadillac while the scientist rattles around in a jalopy"; (3) charging clients "what the traffic will bear"; (4) making their services so expensive that some low-income individuals "do not have access to psychological services they need"; (5) advocating professional ethics under which "the protection of the professional—his ego and his income—becomes more important than the protection of the client or patient"; and (6) going "off into social isolation from his colleagues," and thereby allowing "his ability to do research or to render professional service [to] become rusty and/or out of date." These, obviously, are serious charges, and ones that demand a direct answer, if such an answer is possible. Dr. Sanford's implications will now be considered seriatim.

1. That clinical psychologists in private practice do relatively little research is undeniably true—as Dr. Sanford's figures show, and as is generally recognized. In all fairness, however, these points should be noted in this connection: (a) Virtually all applied scientists—engineers, chemists, medical practitioners, teachers, etc.—do much less research than academic or research scientists. (b) There is no reason to believe that all psychologists—or other applied professional workers—should participate in research. Indeed, if a man can do a good job of psychotherapy (or teaching school

or playing a piano) there are good reasons, from the standpoint of maximum social productivity and well-being, why he should *not* spend much or any of his time in basic research in his specialty. After all, effective division of labor should apply to psychologists as well as to other human beings. (c) The motivations that lie behind the psychological researches of many nonpractitioners are hardly entirely altruistic or social minded. Academic psychologists, for example, get better jobs by doing and publishing research; industrial psychologists literally get paid for doing research; government psychologists are often given research projects as an active part of their jobs. Private practitioners, however, rarely directly gain through research activities, and often have much to lose by the time and energies they devote to such activities. (d) As matters are presently constituted, financial support for research projects is rarely granted to psychologists in private practice, while it is freely granted by governmental agencies and private foundations to academic, industrial, military, and other psychologists. Many private practitioners who would like to engage in research projects are consequently loathe to apply for financial help and end up by doing little or no research. (e) Private practitioners rarely have the help of students, clerical workers, and paid associates that is automatically available to many nonpracticing psychologists.

2. That a few clinical psychologists in private practice drive around in Cadillacs while some nonpractitioners are rattling around in jalopies is doubtlessly true. These facts, however, are also true: (a) The incomes of private practitioners are normally quite exaggerated in the eyes of nonpractitioners, who naively take the incomes of a few unusual (and sometimes not too ethical) practitioners as indicative of the incomes of the many. (b) Relatively few psychological practitioners in a city like New York derive their entire incomes from private practice. The great majority have to add to their incomes with teaching, writing, social agency consultation, and other activities. (c) The income of private practitioners is distinctly limited by the fees they can charge per whole hour of time expended with a patient or client, and rarely can it equal the income of a full professor or industrial psychologist unless the practitioner works more hours per week than do these other psychologists. (d) Academic, institutional, and other psychologists normally obtain net salaries from which no business deductions are made, and they often receive secretarial, clerical, research, professional, and other help for which their employers pay; practicing clinical psychologists normally receive gross incomes from which sizable deductions have to be made for office, rent, secretarial, and other general business expenses. Even, therefore, when gross incomes of private practitioners appear to be high, their net incomes

seldom are. (e) Nonpracticing psychologists are usually accorded, along with their regular salaries, considerable amounts of time off for vacation, sick leave, attendance at professional meetings, holidays, sabbatical leaves, etc.; practicing psychologists derive none of these benefits. Any time that they take from their work is totally unremunerated. (f) Actually, the conditions noted by Dr. Sanford are often reversed, so that it is the "scientist" who (by virtue of publishing some textbook or test of dubious scientific value) rides around in a Cadillac, while the practitioner gets along with a jalopy.

3. That a few psychological practitioners charge their clients "what the traffic will bear" is again factually correct. These points, however, are also factually true: (a) The fees of the great majority of clinical psychologists in private practice are largely set by the type of work they do and the communities in which they practice. In the New York area, for example, Rorschach examinations rarely bring the psychologist more than twenty-five dollars—for which he may spend several hours administering, scoring, and interpreting test results. Psychotherapy sessions in the same area usually bring a psychologist from eight to fifteen dollars an hour, with many more sessions falling on the lower than on the higher end of this scale. At these rates, even the busy practitioner—particularly after he has deducted his business expenses—will hardly get rich. (b) Because many patients or clients are unable to pay even minimum rates for psychological services, and some are unable to pay virtually anything, it is necessary and customary for psychological practitioners to have a sliding scale of fees. Much more often than not, however, the scale slides *down* rather than *up*, so that the number of sessions psychologists hold with clients at less than eight dollars an hour is usually considerably greater than the number of sessions held at fifteen dollars or more an hour. (c) Practicing psychologists in all fairly large cities cannot actually charge their patients or clients "what the traffic will bear" since they are distinctly limited in their fees by the fees of other professional workers in their area. The psychologist's fees, in this connection, are particularly limited by the fees of the psychiatrists in their area, and normally their fees have to be appreciably below those of the psychiatrists if they are to stay in business.

4. That some lower-income individuals do not have access to psychological services they need because of the expensiveness of these services is again doubtlessly true. Here again, however, there are several extenuating circumstances: (a) Almost every psychological practitioner carries some patients who pay him little or nothing; and, obviously, especially when he is spending two or three hours a week with each of such patients, he cannot do very much more than carry a few

of them. (b) It is one of the grim tragedies of our time that, when psychological practitioners charge even the most modest fees, many patients simply cannot afford to pay these modest fees for therapy that must continue week after week, and that often takes place several hours during each week. This discrepancy between the patient's ability to pay for treatment and the psychologist's economic inability to treat him for less than a certain minimum fee is certainly not the fault of the practicing clinician, and he cannot be held accountable for it. It presents a serious problem that society has by no means solved as yet. Moreover, one of the half-solutions to it—that of setting up low-cost clinics—is one which has rarely worked too well in practice, because of the resistance of so many patients to being treated in a clinic setup. Various other solutions to the problem have been set forth; but until one of them turns out to be truly practical, the situation will remain pretty much the way it is; and, again, psychologists can hardly be fairly blamed for the way it is. (c) It should always be remembered that no one blames the academic psychologist because college expenses are now often too high for some students, and no one blames the psychologist in a private mental hospital because his hospital will not accept patients who cannot pay its fees. Why, then, should the private practitioner be adversely criticized for the inability of some patients to pay for the treatment they need? (d) Actually, by treating many patients for considerably less than psychiatrists and medical analysts will today treat them—and often exploiting themselves thereby—psychologists in private practice are probably now doing more to help low-income patients receive otherwise unavailable treatment than is any other group or plan of low-cost treatment.

5. That some psychological practitioners have advocated professional ethics under which the protection of their own egos and incomes would become more important than the protection of their clients is probably true. But just as true are these considerations: (a) The actual standards and legislative acts advocated by groups of practitioners have thus far hardly been unreasonable, but have instead been quite rigid and tough on the practitioners themselves. The standards of membership proposed by two typical groups of clinical psychologists in private practice—the New York and the Los Angeles groups—insist on higher requirements for membership than standards thus far adopted by the APA or any of its divisions. The ethical codes adopted by these groups are virtually identical with the codes adopted to date by the APA and other local psychological associations. The legislative acts suggested by groups of practicing psychologists have thus far included both high enough standards to protect the public and liberal "grandfather" clauses to protect repu-

table existing practitioners. (c) It should not be forgotten that if private practitioners are more concerned with legislative and ethical standards than are other psychologists, they have good reason to be, since they alone have been under steady attack by medical and other groups (in California, New York, New Jersey, and other states) which have literally tried to wipe them out. (d) If private practitioners are more concerned with the protection of their egos than would sometimes seem warranted, it should be remembered that their status and reputation have often been attacked by other psychologists, and that many official agencies (including government agencies and the American Board of Examiners in Professional Psychology) place experience in private practice on a much lower plane than they place equal experience in academic or institutional setups.

6. That some private practitioners go off into social isolation from their colleagues and thereby allow their research and clinical abilities to become rusty and/or outdated cannot be gainsaid. Likewise impossible to gainsay, however, are these facts: (a) A great many—perhaps most—private practitioners, as previously pointed out, do maintain outside educational, clinical, or other contacts. (b) Adequate clinical facilities in which private practitioners may participate outside of their practices frequently are nonexistent. (c) Even when such clinical facilities do exist, the first-rate private practitioner is rarely accorded an opportunity to participate in them on an equal basis, since they are usually directed by nonpracticing psychologists or by psychiatrists who will not allow the clinical psychologist in private practice to participate on such an equal basis—particularly if he is a psychotherapist. (d) Many psychologists in private practice serve relatively small communities where group participation with other psychologists, social workers, or psychiatrists is virtually out of the question. (e) The group practice of psychology is hardly as yet in its infancy—which also goes, in this country, for the group private practice of medicine, psychiatry, social work, etc. Psychological practitioners, therefore, can hardly be blamed for not participating to a larger extent in such group practice. (f) The nature of psychotherapy is such that, at the present time, a large proportion of the American populace would hardly be eager to resort to it on any basis except individual private practice. This, again, is hardly the fault of psychological practitioners.

Essentially, Dr. Sanford's statements and implications regarding psychological practitioners boil down to the fact that it would be desirable if such practitioners did more research, did not charge exorbitant fees, arranged to treat needy patients on a low-cost basis, were socially-minded in their legislative and ethical standard demands, and kept some professional

group contacts in addition to or instead of their individual private practices. With these desiderata the present writer would basically agree. The important question is: How, realistically and feasibly, may they be effected?

To some extent, if all practicing psychologists—as well as nonpracticing ones—consistently followed the ethical standards which are now in the process of being adopted by the APA, some of Dr. Sanford's objections to clinical practice would be met. But by no means all of his criticisms of contemporary practice would thus be overcome—unless we wish to write into our ethical codes the points that all psychologists *must* do research and *must* engage in group as well as individual clinical work. The only thoroughly logical and consistent solution to this problem would appear to be one which Dr. Sanford himself suggests: namely, that it is up to the profession of psychology—including, especially, the APA—"to do what it can to facilitate and encourage practice in group settings."

In other words, if it could somehow be arranged that in almost every community where a psychologist wishes to practice, he could do so with several other psychologists and/or other professional workers; if he could be paid a reasonable sum for participating in this group practice; if he could practice his particular clinical specialty or specialties without undue restrictions by the group; and if he could do so with a status fully equal to that of other members of the group;—only under such circumstances, it would appear, could Dr. Sanford's criteria for a *good* profession of practicing psychology be met. Unless and until, however, such arrangements for group psychological practice become commonplace, is it proper to hold the existing practicing psychologist responsible for many of the ills of present-day society? Is it fair to saddle him with (currently) unrealistic and unworkable ideals and standards, thus adding to his already enormous problems and difficulties?

ALBERT ELLIS

56 Park Avenue, New York City

Who Are the Discoverers of Psychological Knowledge?

The 1951 report of the APA's executive secretary contained sixteen guiding definitions of professional "goodness." Dr. Sanford's discussion included the following statement: "As psychology develops as a profession it will be well for the professional to be continually aware, even if the public isn't, that in the long run his bread is buttered by basic research." While this obviously applies to the physical sciences in their advanced state of development, how much of this statement has truth value for psychology today?

In the profession of psychology, especially clinical psychology, the art of practice runs way ahead of "basic research." For many centuries this was also true in the physical sciences (see Conant, *On Understanding Science*). Conant reports that "only in very recent years have scientific discoveries affected practice to a greater extent than practice has affected science," and he noted that one could reasonably say "before 1850 the steam engine did more for science than science did for the steam engine." Because of its youth and immaturity psychology has been, is, and for a long time will be where physics was before 1850.

What research professor is without conflict when he engages in the affected identification with the physical sciences? "Fooling around" with rats, laboratory gadgets, and statistics, without close contact with the men of practice, is at today's stage of psychology sheer vanity or professional schizophrenia. Is it accidental that the greatest impetus to the growth of psychology as a science and as a profession has come from practitioners with research interest, such as Freud, Rorschach, and Rogers? Has not the practice of psychodiagnostics and psychotherapy done infinitely more for the discovery of psychological knowledge than scientific psychology has done, so far, for clinical practice? It seems, then, that the bread of the psychology college professor and experimentalist is buttered by the generalization that is made by the public from the recognized value of the practitioner to the assumingly similar value of the college teacher and researcher. When Dr. Sanford notes with dismay that "the practitioner or technician drives a Cadillac while the scientist rides around in a jalopy," he may simply reflect the difference in value that the community attaches to the so-called psychologist-scientist in comparison to the so-called psychological practitioner, rather than pointing to a symptom of self-aggrandizement on the part of practitioners.

Is the public's support of teaching and of basic research activities not based on the assumption, by the public, that these activities eventually serve practical community and individual needs? Even if the public is not aware of this, the teachers and "pure" researchers should be so aware!

Instead of all this dichotomous thinking it would be most fruitful for the further development of our science if the natural interdependence between research and practice could find some organizational expression, such as making available to the private practitioners

research facilities—such as graduate-student help—at the disposal of universities. Let the teaching men with much research and little practical knowledge of psychology mingle more freely with the men of practice who know from daily experience the nature of the wide gaps in systematic knowledge that need to be filled and who often have good—theoretically good—suggestions of how to fill them.

Comparing, in my own case, the value of my activities in the various capacities over the years, which included undergraduate teaching, graduate teaching, "pure" research with animals and with people, work for the VA in hospitals, consulting work in industry, etc., I find it difficult to say to which of these opportunities for learning and experience I owe my present relatively high work morale and productivity. Of this, however, I am sure: teaching emotionally immature minds intellectual generalities in the didactic tradition of college education proves to be more stimulating to reiteration than to the discovery of knowledge. And as far as my own basic research attempts are concerned, while I enjoy this type of work tremendously, as I enjoy tough chess games, I must say that I personally find the fantasy-identification with theoretical and experimental physics that "pure" research activities are the royal road to the discovery of applicable laws of human behavior highly precarious. When doing pure research I feel in disharmony with my high respect and tolerance for the tremendous complexity of social and interpersonal reality. When I do clinical practice, I am forced to come to terms with, and find concepts, in harmony with this realistic complexity and infinite variability. Why not combine the reality sense gained in clinical practice with our traditional research role?

As far as an opportunity to come closer to comprehending the nature of the variables affecting human behavior is concerned, I am enthusiastic about these opportunities inherent in intensive clinical and consulting work. Such work requires keen participant observation of human dynamics. Private practice represents a unique opportunity for coming closer to fundamental psychological knowledge, an opportunity that should not be denied to our profession or yielded to related fields. It is this opportunity for discovering new psychological knowledge that attracts me to psychology and to private practice, rather than the possible opportunity of driving a Cadillac or having a swimming pool.

GEORGE R. BACH
Beverly Hills, California

Across the Secretary's Desk

The Membership Survey

On March 11 the last of 6743 APA Directory-National Register questionnaires were coded and sent to the IBM shop to be punched on cards. The protracted and intricate collaboration between APA and the National Scientific Register thus comes close to fruition. We and the government will soon possess reasonably complete data on American psychologists and what they do. The National Register is now making an analysis of the responses of 6580 APA members to the initial part of the questionnaire. Our own analysis, including additional questionnaire items and returns from approximately half of the new Associates elected on January 1, 1952, is well started, under the general direction of George Albee. The basic IBM runs in our analysis should be completed by May 1. A report, in whatever form the APA Board of Directors deems desirable, should be ready before the end of the summer.

Our data are now arranged in such a form that we can ask and answer a wide variety of questions about psychologists. We will have good data on such things as salary ranges, age distributions, places of employment, primary and secondary fields of competence, levels of training, military-relevant specialties, time spent on governmentally sponsored research, and ideas about APA's problems. We can ask and answer questions about specific groups of psychologists; e.g., women, members of any particular division, members in private practice, Life Members, etc. The nature and extent of data-analysis will be guided by ideas concerning the relative significance for psychology of the almost infinite number of questions that might be asked of the data.

All of our data will be somewhat limited in usefulness, of course, by the fact that our sample is not perfect. A total of 6823 people out of a 1951 membership of 8554 returned the questionnaire. A total of 793 out of 1417 new Associates returned it. We do not know what biases may exist in our sample of approximately 75 per cent of the membership. A quick analysis based on a sample of incomplete entries in the 1951 Directory shows no relation between date of becoming a Fellow and frequency of returned questionnaires. There is

some tendency for the frequency of returns to drop with the lateness of election to Associate membership. These and other factors will affect the interpretations of our data.

This study of our membership is not only forwarded by the collaboration with the National Scientific Register but has been granted some financial support by the Manpower Branch of the Office of Naval Research.

The Central Office Staff

A large proportion of our members who visit the Central Office for the first time are surprised at the size of the Central Office staff. Some are surprised that it is so large. Just as many are surprised that it is so small. These bipolar surprises naturally start us to thinking about the optimal size of an APA staff and they suggest that it is a good idea occasionally to tell the membership about Central Office people and what they do. There follows a list of Central Office employees and the jobs they have.

George W. Albee, assistant executive secretary, placement and public information officer.

Joan Beatty, back order clerk.

Lorraine Bouthilet, managing editor.

Carmen Eldridge, editorial assistant.

Judith Epstein, financial clerk.

Jane D. Hildreth, Directory editor, technical aide to Membership Committee and to Conference of State Psychological Associations.

Richard Hurwitz, addressograph operator.

Carolyn L. Konold, Directory editor and assistant to Membership Committee technical aide.

Dorothy LeBourgeois, secretary to assistant executive secretary, editorial assistant.

Virginia T. Miller, receptionist-secretary.

Helen S. Morford, administrative assistant.

Fillmore H. Sanford, executive secretary.

Anna Knelle Stormer, membership records and subscription clerk.

Walter C. Taylor, accountant.

Edna M. Teunis, editorial assistant.

With the exception of the people who handle the Central Office editorial work and an additional secretary, the size of the staff is essentially the same as in 1948. Since 1948 the Association has almost doubled its membership. Its complexity has also

probably increased (we here *feel* that it increases daily). The Central Office has taken on additional duties and functions. While increases in staff-size need not vary linearly with increases in either membership or complexity of function, it is clear that more members and more functions do demand more Central Office work. While a good office morale can exist if everybody is reasonably overworked, too heavy a work load not only weakens morale but decreases the quality of work and increases the frequency with which deadlines are missed. We are now very close to a point where we must hire additional staff if dues bills are to be mailed on time, if an annual flow of 15,000 or so checks are to be cashiered properly, if our annual 4,000 address-changes are to be entered, if we are to handle 300,000 or more pieces of mail per year, etc., etc., etc.

The job titles in the list above are intended to be descriptive rather than "official," but like many job titles they fail miserably to convey good information about what our people actually do. In a small and informal office faced with a varied and changing series of jobs, everybody sort of does everything. At times, everybody is a clerk-typist. At times almost anybody is likely to find himself or herself a proofreader or mimeographer. Generally we try to define our jobs with sufficient clarity to give some degree of structure to our lives but not so rigidly as to destroy the flexibility needed for the performance of varied and seasonal functions. If we are to avoid periods when some people are overworked and underpaid while others are underworked and overpaid, and if we are to get our seasonal jobs done on time, we must have great flexibility of function.

I think we have a very remarkable group of people here. They are all flexible. They all work hard. They laugh often and easily. They all seem to like one another. Nobody pouts. We have little hierarchy and less formality in the place. The objective observer would probably give us a high rating on general productivity and maybe an even higher one on the quality of our office parties. I, frankly, like to work here.

Our major present problem is one of space. We are badly overcrowded, but we are hoping that we will have a new building before APA again doubles in size.

Wanted: Scientific Articles for the *American Psychologist*

We here have talked with a number of members about the desirability of including in the *American Psychologist* not only articles about psychologists, as scientists, teachers, administrators, and practitioners, but also articles about psychology as a science. All our confreres so far have agreed that we might well try a few scientific articles on topics of general interest to many psychologists. We hereby elicit such articles.

The desire to seek and to publish such articles is based on the beliefs that (a) there are technical psychological topics of general interest to a large proportion of our members, (b) that many members would read such articles for "general information" if the article were written so that the reader does not have to work too hard to get the content, and (c) that articles for the "intelligent layman" within APA would usefully supplement existing media of scientific communication.

Though psychologists are becoming more and more specialized in interests and competencies, most of us still share a common training experience, still maintain some degree of interest in what is going on in the science of psychology. The personnel expert will still get interested in what the theoretician is about—if the theoretician will help him enough. The experimentalist would like to know what is going on in clinically oriented research and will read a clinical article if it does not hit him too fast with too many unfamiliar technical concepts.

We would like to receive articles by specialists about specialties, articles of sound scientific content but so written that intelligent non-specialists or intelligent specialists in other psychological areas can read them with profit—and at least a modicum of pleasure.



EDWIN B. NEWMAN

Chairman, Department of Psychology, Harvard University

Chairman, Publications Board, American Psychological Association

Psychological Notes and News

William D. Orbison, member of the psychology department of the University of Connecticut, died February 14, 1952 at the age of 40. His students and colleagues have organized a William D. Orbison Memorial Fund in order to perpetuate his memory as an excellent, inspiring, and sympathetic teacher. Proceeds from the fund will be used to honor psychology students of unusual merit at the University of Connecticut each year. Contributions may be sent to the William D. Orbison Memorial Fund, Department of Psychology, The University of Connecticut, Storrs, Connecticut.

Horace B. English, Ohio State University, has been awarded a Fulbright lectureship in the University of Punjab, Lahore, Pakistan. He will be at the University for two semesters beginning in October, 1952.

William O. Jenkins, formerly with the department of social relations of Harvard University, is now professor of psychology at the University of Tennessee.

Sol L. Warren has recently accepted a promotional appointment as supervisor of Tuberculosis-Cardiac Services in the New York City office of the Division of Vocational Rehabilitation, New York State Education Department.

The address of **Clifford P. Froelich**, Secretary of the Division of Counseling and Guidance is now School of Education, University of California, Berkeley, California. It is essential that all correspondence be sent to his new address. Dr. Froelich has recently been appointed associate professor in the School of Education at Berkeley.

H. M. Johnson, research professor (emeritus) of Tulane University, who was appointed visiting professor and special adviser to the president of the College of Idaho, has returned to private practice in New Orleans.

William J. Hartman has recently accepted a position as psychologist with the Wisconsin State Reformatory at Green Bay, Wisconsin. He was formerly employed at the National Training School for Boys in Washington, D. C.

Robert L. Hobson, formerly associate professor of psychology at the University of Tulsa, has been appointed to the Chicago staff of Rohrer, Hibler & Replogle.

Joseph R. Royce has been appointed assistant professor of psychology at the University of Redlands, California, as of September, 1951.

Arthur L. Kobler has been appointed chief clinical psychologist at The Pinel Foundation in Seattle, Washington, as of September, 1951.

I. Leon Maizlish is now chief clinical psychologist of the Flint Child Guidance Clinic, 302 W. Second Avenue, Flint, Michigan. He has resigned his position as clinical psychologist at the VA Mental Hygiene Clinic, Chicago, Illinois.

A department of psychology has been recently established at the Rosewood State Training School in Owings Mills (Baltimore County), Maryland. The department includes the following personnel: **Myrtle Astrachan**, chief psychologist; **Ernest Young** and **Marion Young**, psychologists; and **Robert Williams**, intern.

The following appointments have been made at the New Jersey State Diagnostic Center at Menlo Park: **Robert K. Alsofrom**, chief psychologist; **Marvin Metsky**, assistant psychologist; **Ruth Doorbar**, junior psychologist; **John Pirroni**, junior psychologist.

Gregory Razran, chairman of the department of psychology at Queens College in New York, has been granted a leave of absence by the New York Board of Higher Education to serve as visiting professor of psychology at the Hebrew University of Jerusalem. He will begin his duties at the University in April and remain through July of this year. In addition to teaching, he will be establishing a department of psychology. American psychologists who would be interested in a position at Hebrew University are invited to write to Dr. Razran.

John Bennett, Jr., and **Gerald J. Briskin** have recently received commissions as 2nd Lieutenants in the Army Medical Service Corps and will participate in the Army Senior Psychology Student

Program. Lieutenant Bennett is now working for his doctor's degree in psychology at Boston University and will serve his internship at Fitzsimons Army Hospital, Denver, Colorado. Lieutenant Briskin, now at the University of Michigan, is also working for his doctor's degree in psychology and he will intern at Letterman Army Hospital, San Francisco, California.

Directory Errors. There follows a list of known errors in the 1951 Directory. Some of these were editorial errors; others reflect misunderstanding on the part of the members.

Page 17. Baehr, Melany E. Her current position as Research Associate and Project Director with the Industrial Relations Center at the University of Chicago should be listed as continuing, not as terminating in 1951.

Page 25. Bassett, Dorothy M. Change her current employment to Vineland State School. This correction should also be made for her entry in the geographical section on page 566.

Page 25. Bates, Modene D. Her APA membership status is A(51).

Page 52. Bray, Olive King. Her interests should read as follows: Employee counseling, vocational guidance, personnel selection of American and overseas personnel.

Page 81. Clark, Cherry Ann. Delete *AM* 51 (Sept) *Claremont*.

Page 90. Cook, Charles H. Change *Mrs.* to *Mr.*

Page 109. Deutsch, Cynthia Price. Delete *PhD* 51 (Dec) *Chicago*.

Page 112. Diller, Leonard. Delete *PhD* 51 (Nov).

Page 133. Evans, Ralph M. The year of his BS degree is 28, not 38.

Page 245. Kelly, Martha L. Her APA status is A(44) 14. She is also listed, incorrectly, as Martha Littleton in the Division 14 list of Associates on page 626.

Page 289. Lundin, William H. Delete *PhD* 51 (Dec) *Northwestern*.

Page 328. Morgan, Ross L. Delete *PhD* 51 (Sept) *Northwestern*.

Page 340. Newland, T. Ernest. In line 8 of his entry change *USAF* to *USNR*.

Page 349. Orzack, Maressa H. Her present position should be changed to: Research Fellow, Department of Ophthalmology, Indiana University School of Medicine.

Page 391. Roman, Robert M. Delete *PhD* 51 (Sept) *Houston*.

Page 402. Saldanha, Estelita. The incorrect sex is indicated for Dr. Saldanha. Instead of (F), it should be (M).

Page 408. Schaul, Martin W. Delete *PhD* 51 (Dec) *Columbia*.

Page 435. Smith, William M. His degrees were omitted. They are: BA 43 Miami U; MA 48, PhD 50 Princeton.

Page 517. Youtz, Richard P. His APA status is incorrectly indicated. It should be: A(36) 2; F(45) 1, 3, 19. He is correctly placed in the Division listings.

Page 569. Buffalo, N. Y. Insert the following: Sanderson, Herbert, Jewish Community Service Society.

Page 602. Laramie, Wyo. Delete the entry for Fred B. Morgan. He is correctly listed as being in Denver, Colo.

Page 630. Delete the word *Psychologists* from the name of Division 17. Insert the name of Salvatore G. DiMichael in the list of Fellows. He is incorrectly listed as an Associate on page 631.

Corrections in the article "Stipends for Graduate Students in Psychology: 1952-1953" (February *American Psychologist*). The Department of Social Relations at Harvard University requires the Miller Analogies Test. At the State University of Iowa Child Welfare Research Station the stipends for preschool teaching assistantships should be \$810-\$1,000 with tuition exemption.

Marguerite R. Hertz, Western Reserve University, and Morris I. Stein, University of Chicago, recently conducted three-day workshops on the Rorschach and TAT during a course for potential psychological assistant officers at the Medical Field Service School, Brooke Army Medical Center, Fort Sam Houston, Texas.

The Board of Trustees of the Alumni Fund of Michigan State College again offer seven predoctoral and one postdoctoral fellowship for study at Michigan State College. Predoctoral fellowships ranging in value from \$800 to \$1,200 are open to candidates for the PhD degree. The postdoctoral fellowship has an annual value of \$3,000 and is open to qualified candidates in any field of research for which Michigan State College has the appro-

priate facilities. Inquiries should be addressed to the Dean of the School of Graduate Studies, Michigan State College, East Lansing, Michigan. Completed applications must be received before May 1, 1952.

Vacancies

Clinical psychologist, either sex, PhD. For general clinical function in service center, to work with psychiatrist, psychologists, reading teachers, vocational and personnel counselors, dealing with children, students, community and industrial referrals. Some teaching and academic rank if qualified and interested. Salary open. Apply to Professor George S. Speer, 3329 S. Federal St., Chicago 16, Illinois.

Clinical psychologist, PhD, to work under general administrative direction of State health officer on technical psychological work involving examination and classification of individuals referred by physicians, parents, schools, courts, nurses, social agencies, etc. Good background in clinical psychology and at least one year of experience required. Salary \$435 per month to begin, increasing to \$535. Apply to John J. Sullivan, Personnel Officer, Nevada State Department of Health, P. O. Box 435, Carson City, Nevada.

Instructor or assistant professor in industrial psychology. PhD or all residence work completed; teaching experience desirable. Salary, \$3,600-\$4,500 for nine months. Apply to Dean L. S. McLeod, University of Tulsa, Tulsa, Oklahoma.

Child psychologist, MA required and/or clinical internship with experience; duties involve diagnostic work and counseling in child guidance center, doing research and teaching. Salary, \$3,510-\$4,110. Apply to Jerman W. Rose, M.D., Director, Oneida County Child Guidance Center, 1506 Whitesboro Street, Utica, New York.

Chief clinical psychologist, either sex, PhD. Interest in and ability to work with psychotic patients. Salary, \$4,800 plus unfurnished apartment. Apply to Dr. Thomas L. Young, Mississippi State Hospital, Whitfield, Mississippi State Hospital.

Assistant professor of clinical psychology in American University of Beirut, Lebanon. Male, PhD, to teach in department of psychology, in clinical field. Salary, \$3,000 for academic year. Apply to Near East College Association, 46 Cedar Street, New York 5, New York.

Convention Calendar

AMERICAN PSYCHOLOGICAL ASSOCIATION

September 1-6, 1952; Washington, D. C.

For information write to:

Dr. Fillmore H. Sanford
1515 Massachusetts Avenue N.W.
Washington 5, D. C.

WESTERN PSYCHOLOGICAL ASSOCIATION

April 25-26, 1952; Fresno, California

For information write to:

Dr. Richard W. Kilby
Department of Psychology
San Jose State College
San Jose 14, California

MIDWESTERN PSYCHOLOGICAL ASSOCIATION

April 25-26, 1952; Cleveland, Ohio

For information write to:

Dr. David A. Grant
Department of Psychology
University of Wisconsin
Madison, Wisconsin

ROCKY MOUNTAIN BRANCH OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

May 2-3, 1952; Boulder, Colorado

For information write to:

Dr. Lawrence S. Rogers
1046 Madison Street
Denver 6, Colorado

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HOTEL RESERVATIONS

American Psychological Association
60th Annual Convention

Washington, D. C., September 1-6, 1952

The hotels listed below have agreed to furnish room block reservations for the APA Convention. These are the only hotels which have agreed to reserve space for APA members and which do not operate on a color segregational basis. The range of prices for each type of accommodation is shown. Few rooms are available at the lowest prices.

We are able to assure only rooms for double or multiple occupancy. Please determine in advance those who will share accommodations. Only a limited number of single rooms are available.

Division 3 (Division of Experimental Psychology) has expressed an interest in being housed in the Mayflower Hotel. Members who wish to stay in this hotel should mark the Mayflower as their first choice, and send in their requests for accommodations as soon as possible.

The hotel reservation application given below is intended for use by persons attending the APA Convention. The APA Housing Bureau is unable to assume responsibility for those who will be attending meetings of other groups being held at the same time as the APA Convention.

Hotels and Rates Per Day

Hotel	Single	Double	Twin-Bed	Suite
Ambassador 1412 K Street, N.W.	\$5.50-\$ 9.00	\$ 8.50-\$12.00	\$ 8.50-\$12.00	—
Burlington 1120 Vermont Avenue, N.W.	—	\$ 9.75-\$15.00	—	—
Lee House 15th and L Streets, N.W.	\$7.00-\$ 8.50	\$10.50-\$13.50	\$10.50-\$13.50	—
Mayflower Connecticut Ave. & DeSales St., N.W.	\$6.00-\$16.00	\$12.50-\$19.00	\$12.00-\$18.00	—
Raleigh 12th and Pennsylvania Aves., N.W.	\$6.00-\$10.00	\$10.00-\$15.00	\$ 9.00-\$15.00	—
Statler 16th and K Streets, N.W.	\$6.00-\$13.50	\$10.50-\$17.00	\$ 9.00-\$13.50	\$26 and up
Willard 14th and Pennsylvania Aves., N.W.	\$6.00-\$ 9.50	\$10.00-\$15.00	\$ 9.00-\$14.00	—

Hotel Reservation Application

(Please print or typewrite)

APA Housing Bureau
204 Evening Star Building
Washington 4, D. C.

Please reserve the following:

.....Single room(s)	Rate \$.....to \$.....	per room
.....Double room(s)	Rate \$.....to \$.....	per room
.....Twin-bed room(s)	Rate \$.....to \$.....	per room
.....Suite(s)	Rate \$.....to \$.....	per suite

Choice of hotel: (please be sure to give four choices.)

Hotel	First choice
Hotel	Second choice
Hotel	Third choice
Hotel	Fourth choice

Date of arrival	A.M.	P.M.	Date of departure	A.M.	P.M.
(These must be indicated. Please be precise.)					

Name(s) of room occupants:

Name	Address	City	State
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(Attach list of additional names, if necessary)

Note: Mail this application form to the APA Housing Bureau, 204 Evening Star Building, Washington 4, D. C. Do not mail it to the APA Central Office. You will receive confirmation directly from the hotel accepting your reservation after July 1, 1952.

(Copies of this form may be obtained from the APA Central Office.)

ADVANCE REGISTRATION FORM

American Psychological Association
60th Annual Convention
Washington, D. C., September 1-6, 1952

Please print:

Name: Mrs. _____
Miss _____
Mr. _____
Dr. _____
last first middle

Professional Affiliation:

(Name of affiliation or
institution to appear
on badge)

City

State

Home Address: _____

Division Membership: _____

Please check one:

APA Fellow.....

Member, Student Journal Group.....

APA Associate.....

Foreign Affiliate.....

Non-member*.....

*Non-members must pay a registration fee of \$2.50. This fee is waived for Foreign Affiliates and members of the Student Journal Group.

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PSYCHOLOGY AND ITS RELATIONSHIPS WITH OTHER PROFESSIONS¹

AD HOC COMMITTEE ON RELATIONS BETWEEN PSYCHOLOGY AND THE MEDICAL PROFESSION

In publishing this report, the Board of Directors calls attention to the fact that this is a statement of *proposed* principles and policies; at the moment, the statement represents only the best thinking of the Committee which prepared the report. It is the Board's intention, however, to recommend appropriate Council action on the Committee's recommendations at the September meeting.

For this reason, all members of the APA are

urged to study the report with care and to communicate to their divisional officers any suggestions for significant modification of the proposed policies. Divisional officers are in turn urged to forward such suggestions to the Executive Secretary so that they may be considered by the Board of Directors in formulating specific proposals for Council action. These suggestions should reach the Executive Secretary not later than August first.

AMERICAN psychology, because of its very nature, is involved in intricate relations with many other scientific and professional fields. Historically rooted in both philosophy and the natural sciences, some of the content of psychology overlaps that of other academic disciplines. Much of the application of psychology occurs in settings where older, more established professions are already on the scene; in other words, the psychologist applies his own techniques and insights to problems of long standing concern to ministers, lawyers, social workers, educators, administrators, politicians, physicians, engineers, or other professional people. Neither in its pure nor

its applied aspects does psychology have an exclusive natural habitat, its own unique area of operation.

In going about what he regards as his proper business almost every psychologist is inevitably brought into a relationship with other scientists and other practitioners. Sometimes he is seen as a valuable and respected ally in the attack upon human problems. Sometimes he is perceived as a threat and an interloper. Almost always, whatever his field of employment, he is, in fact, a late-comer. And almost always the effectiveness of his contribution, as well as his opportunity to make it, is determined at least in part by the sort of relations he establishes with people possessing the interests, competences, and methods of other professions.

Constructive thinking about psychology's relations with other professions demands that we look first at psychology—that we attempt to understand what it is, what it has to offer, what it *wants* to offer. We cannot hope to guide wisely our relations with others until we know what are the basic values underlying our efforts and serving as criteria against which specific policies and practices can be evaluated. This report begins then with some observations about the nature of American psychology. It next attempts to describe the characteristics of a profession of psychology, which promises the best expression and implementation of the social and human values widely shared by psy-

¹ This is the report of an *ad hoc* Committee appointed by the Board of Directors in May 1951 to formulate recommendations for the guidance of the Association in actions involving the relationships between psychology and medicine. In the course of its deliberations, the Committee concluded that it was necessary to deal first with the more general problem of the relationships between psychology and any other profession, and the present report deals with this phase of the project. It is hoped that at a later date it will be possible to publish a report dealing with the specific problems of the relationship of clinical psychology and psychiatry.

A preliminary report of this Committee submitted to the Board of Directors in September 1951 was approved for publication. Because of the widespread interest in the report among APA members mimeographed copies were sent to several hundred persons. On the basis of suggestions received, this considerably revised report was prepared. In March 1952, it was approved by the Board for immediate publication.

chologists. These "criteria of a good profession" lead to the formulation of action-relevant policies to guide psychology's relations with *all* professions.

I. THE NATURE OF PSYCHOLOGY AS A PROFESSION

American psychology, like any other profession, is a social entity existing in and interacting with a supporting society. A large majority of American psychologists are members of the American Psychological Association. Even though all are members of the same scientific and professional organization, psychologists differ widely from one another. They differ in the type and amount of training and experience. They possess different kinds of professional competences and competence in any one area varies in degree from one psychologist to another. The setting for psychological work varies from the laboratory to the factory, from the classroom to the psychopathic ward, from nursery school to university, from schools of education to schools of medicine, from the mental hygiene clinic to the private consulting room, from large governmental or military agencies to local community projects. As in all other professions, there are (1) those who devote their primary energies to the discovery of knowledge, (2) those who are primarily teachers, (3) those who work to apply knowledge and techniques to the solution of practical problems, and (4) those who administer the activities of other professional people. Few psychologists, however, fit neatly into any one of these categories, for most research psychologists also teach, many teachers engage in some application, and many practitioners do research.

Some facts about APA membership will indicate the tremendously varied nature of psychology and the heterogeneity among those who constitute the profession. In January 1952 the APA had a total membership of 9950. Of this number approximately a third were Fellows of the Association, i.e., psychologists with a PhD degree and at least five years of postdoctoral experience in research, teaching, or practice. Two-thirds were Associates. The minimal requirement for Associates is two years of graduate work or one year of graduate work plus one year of supervised experience. A majority of the Associates now surpass these minimal requirements; many of them have the PhD but are not yet qualified on the basis of experience for Fellow status. Table 1, giving 1951 figures on membership in the seventeen divisions

TABLE 1
APA divisional membership

	Fel- lows	Asso- ciates	Total
1. Division of General Psychology	147	345	492
2. Division on the Teaching of Psychology	89	136	225
3. Division of Experimental Psychology	262	272	534
5. Division on Evaluation and Measurement	116	297	413
7. Division on Childhood and Adolescence	118	219	337
8. Division of Personality and Social Psychology	208	382	590
9. The Society for the Psychological Study of Social Issues	157	405	562
10. Division on Esthetics	23	32	55
12. Division of Clinical and Abnormal Psychology	502	787	1289
13. Division of Consulting Psychology	190	—	190
14. Division of Industrial and Business Psychology	179	130	309
15. Division of Educational Psychology	195	194	389
16. Division of School Psychologists	76	194	270
17. Division of Counseling and Guidance	168	477	645
18. Division of Psychologists in Public Service	33	93	126
19. Division of Military Psychology	132	65	197
20. Division on Maturity and Old Age	96	73	169

of APA, shows something of the wide distribution of interests and competences among psychologists. Many members are associated with more than one division.

With respect to field of employment, approximately 5,000 APA members work in an academic setting, primarily as teachers or researchers. About 1,500 work for the federal government, on research projects in various civilian and military agencies and as clinicians in hospitals, clinics, or other agencies. Another 1,500 work for state and city governments, in schools, clinics and other agencies. About 500 are employed in private industry, some 300 are graduate students, and approximately 250 are in private clinical practice.²

Where is the unity in this diversity? What holds together the profession of psychology? The enormous heterogeneity of psychologists makes relatively uneasy an organization involving all psychologists, and any action affecting all psychologists rarely or never affects all equally. But the American Psychological Association seems a relatively stable organization and one with which

² These estimates are based on an analysis of a sample of the total membership.

a wide variety of psychologists are strongly identified. The most important factors in the identification of psychologists with their profession and with the organization designed to serve it seem to be (1) a common interest in the scientific understanding of human behavior, (2) a widely shared desire to turn to human benefit a body of specialized knowledge about human behavior, and (3) the sharing of a more-or-less common training designed to increase the individual's ability either (a) to contribute to the advance of specialized knowledge, (b) to communicate that knowledge, or (c) to apply that knowledge.

These communalities, even in the face of psychology's enormous heterogeneity, appear sufficient to give the profession a unity and to make possible the formulation of common goals and aspirations, in the pursuit of which every psychologist can invest his greatest and his best effort.

II. ASPIRATIONS FOR THE GOOD PROFESSION OF PSYCHOLOGY

Whether primarily researchers, teachers, appliers, or administrators, psychologists appear to share enough common values to permit a description of what they as a group will regard as a good profession. The most widely shared pattern of values among psychologists appears to be a respect for evidence combined with a respect for the dignity and integrity of the human individual. Using these as guides, we have attempted to list, at least tentatively, the characteristics of the "good profession of psychology," a profession that will make its maximum contribution to society, one that will allow each psychologist, whatever his particular field of interest and competence, to work at his best, and one that will permit any individual possessed of humanistic and democratic values a justifiable pride in his profession.⁸

1. *A good profession guides its practices and policies by a sense of social responsibility.* Professions exist for people and not for professionals. Society supports a profession because it looks upon the profession as a contributor to human welfare. If psychology ever uses society more than it serves it, if psychology aggrandizes itself beyond the

point necessary for its giving of its best, it will be an unhealthy profession.

Since no society yet devised has achieved perfection in advancing and protecting the integrity of the individual, a good profession must do more than adjust passively to the explicitly stated preferences of a society; the contribution of the good profession must be creative rather than passive, for perfect adjustment to an imperfect social reality can be stagnating. The good profession of psychology will seek through investigation, practice, and teaching to improve the society which supports it.

2. *A good profession will devote relatively little of its energy to "guild" functions, to the building of its own in-group strength, and relatively much of its energy to the serving of its societal functions.* If a profession either through a drive for status among professions, or through a preoccupation with its own internal structures and politics, reduces the effort it can invest in research, teaching, or application, it cannot best meet its social responsibility.

A profession needs organization in order to function effectively. But too much organization is nonfunctional. So is too much concern for position in that organization.

A profession needs to be perceived accurately by the citizens of a democratic society, hence there is justification for public information practices that increase the accuracy of public perception of the profession. The profession may well have a responsibility to engage in such practices. But public relations practices that yield inaccurate perceptions of the profession cannot be justified, however much public support such public relations may win. Psychology must search its motives carefully before it engages in lobbying activities or in aggressive public relations.

3. *A good profession will not represent itself as able to render services beyond its demonstrable competence.* Neither in public information programs, in teaching, nor in relations with potential users of professional services can a profession justify over-enthusiastic salesmanship. Psychologists should work to the end that both the individual and the society see us as we are and appreciate what we have to offer, but we must avoid halos and exaggerated claims. The individual members of the good profession of psychology will perform the functions for which they are trained

⁸ These "criteria of the good profession" were originally formulated by Fillmore H. Sanford and appear in the Annual Report of the Executive Secretary: 1951, *American Psychologist*, 6, pp. 664-670, 1951.

and will avoid the assumption of roles for which they are not trained.

4. *A good profession has a code of ethics designed primarily to protect the client and only secondarily to protect the members of the profession.* It is possible for professional ethics to evolve in such a form that the protection of the professional person—his ego and his income—becomes more important than the protection of society or of the recipient of professional services. The teacher's ethics must focus on the welfare of the student, the researcher's ethics on the advancement of science as a service to mankind, the applier's ethics on the welfare of the client and of the client's society.

5. *A good profession will find its unique pattern of competencies and focus its efforts on carrying out those functions for which it is best equipped.* The good profession needs to find an area of operation that supplements rather than duplicates the contributions of other professions. Many psychologists are now convinced that our primary competencies are in teaching and research, and we should therefore concentrate our professional effort not on rendering services, but on serving society and other professions through teaching and research activities. If this is so, then the good profession of psychology may eventually engage in actual front-line applications only to an extent necessary to keep its teaching alive and its research real. Others are equally convinced that the needs of society demand a rapid expansion of the applied specialties of psychology. The good profession of psychology will seek to determine how it can make its greatest contributions to society and will guide itself toward making these contributions while resisting any diverting pressures.

6. *A good profession will engage in rational and cooperative relations with other professions having related or overlapping competencies and common purposes.* The good profession keeps its eye on its social goal and is ready to collaborate with all other professions which seek the same or related goals. When related professions forget their common goals and concentrate on superficial points of conflict, a tendency that is sometimes facilitated by the existence of professional organizations, defenses are up, rationality is down, and maladaptive behavior is the result.

7. *A good profession will be characterized by an adaptive balance among efforts devoted to re-*

search, to teaching, and to application. A healthy profession cannot improve nor long exist without parallel contributions from its discoverers of knowledge, its teachers of knowledge, and its appliers of knowledge. In many professions society gives to those on the forefront of application more status and more income than is accorded either teachers or researchers. In others, the research workers are respected more highly than are the teachers or the more "practical" appliers. In any profession, each of these groups, regardless of the public status accorded it, has a functionally significant role to play. A healthy profession of psychology will distribute its resources among these functions in a way most conducive to its meeting of its social responsibility and will do what it can to see that neither researchers, teachers, nor appliers are relegated to positions of second-rate status.

8. *A good profession will maintain good channels of communication among the "discoverers," the teachers, and the appliers of knowledge.* If a profession is to produce at its best, its appliers, its teachers, and its research workers must be on speaking terms with one another. At the moment, when many psychologists play roles involving all three functions, our internal communication appears to be good. But it is easy for the research worker to lose touch with his practicing colleague, it is easy for the teacher to become isolated from the major developments in either the basic or the applied field, and the practitioner easily shuts off channels that keep him in touch with basic scientific advances that are of relevance for his work. A good profession of psychology will avoid both the emotional and technical barriers to sound intraprofessional communication.

9. *A good profession is free of nonfunctional entrance requirements.* The only defensible criteria for judging an individual's suitability for entrance into a profession are those related to his potential contribution to society. Exclusion on the grounds of race, nationality, creed, or vague unvalidated considerations of an applicant's personality is never warranted. The erection of artificial barriers to training, for the purpose of eliminating "undesirables" or of "cutting down competition" is not justifiable.

10. *A good profession is one in which preparatory training is validly related to the ultimate function of the members of the profession.* The course

of training in any profession is necessarily long and expensive. It should not contain elements that are clearly unrelated to the technical skills, professional competence, research needs, or general enlightenment of members. The discovery of new knowledge should lead to changes in training programs. No training procedures should persist simply because they were good for father or grandfather. In these days of shortages of all professional personnel, society cannot afford to support training programs that are inefficient or unduly prolonged. Neither, of course, can society support programs that turn out inadequately prepared professionals.

11. *A good profession is continually concerned with the validity of its techniques and procedures.* It is easy for intellectual or methodological fads to spread through a profession. The best defense against fads and the harm they may do is a scientific attitude on the part of the individual and a scientific orientation on the part of the whole profession.

12. *A good profession is one whose members are socially and financially accessible to the public.* Psychology should never become so exclusive nor so expensive that all individuals, regardless of income, do not have access to the psychological services they need.

13. *A good profession is a free profession.* Any profession in a democratic society, having freely accepted its social responsibility, must be free to commit that responsibility in ways dictated by its own best wisdom. A good profession must face all the evidence regarding the needs for its services and must honestly assay its competence to meet these needs. It must, with its best conscience and best intelligence, act according to this evidence. It must consider evidence from political groups or from other professional groups. It should always be amenable to reasonable persuasion, but it must resist all attempts at nonfunctional restrictions upon its freedom of thought, i.e., it must be free to act in accordance with its considered judgment provided these acts are not demonstrably against the advancement of the human values it embraces. A good profession of psychology will remain free of forces—from within itself or from outside—that would limit or encumber its healthy growth toward greater effectiveness in fulfilling its perceived function in society.

III. BASIC PRINCIPLES TO GUIDE THE RELATIONSHIP BETWEEN PSYCHOLOGY AND OTHER PROFESSIONS

The foregoing considerations have led the Committee to the formulation of a series of basic principles which we believe will serve as useful guides to psychology in its relationships with *any* other profession: medicine, the ministry, social work, business administration, engineering, law, education, etc. as well as to our relations with colleagues in other scientific disciplines. Some of the principles have greater relevance to the academic situation, some to the work of the applied psychologist and still others to the laboratory. Although certain of these principles are implicit in the previous discussion, we believe it useful to state each principle as explicitly as possible. And, because of the several distinctive roles played by psychologists in American society, it seems preferable to formulate certain of the basic principles with respect to these roles, e.g., teacher, researcher, administrator, or practitioner.

Principle 1

Guided primarily by the criterion of societal welfare, the American Psychological Association, as the official national organization of psychologists who function as researchers, teachers, practitioners, and administrators, accepts full responsibility for coordinating the development and functioning of the profession of psychology. As members of the Association, psychologists accept: (a) the responsibility for advancing basic knowledge concerning human behavior, (b) the responsibility for training qualified aspirants to professional competence, (c) the responsibility for establishing and maintaining standards of professional competence, and (d) the responsibility for serving society in accordance with a code of ethics designed to protect both individuals and society which it serves.

Principle 2

As researchers, psychologists accept and share the responsibilities and ethics common to all research scientists. These include:

- a) the obligation to perform such research as is within his field of competence and is compatible with the demands made upon him;
- b) the freedom to investigate any problem;
- c) the self-imposed restriction to limit one's research methods to those not inimical to the wel-

fare of society or of the human subjects being studied;

d) the responsibility to make all significant research findings readily and publicly available;

e) the willingness to cooperate fully with investigators of other disciplines in the development of new knowledge about human behavior.

Principle 3

As teachers, psychologists accept and share the ethics and ideals of all members of the teaching professions. These include:

a) the freedom to teach in accordance with the dictates of one's conscience;

b) the self-imposed restriction to keep one's teaching activities within the limits imposed by the teacher's limits of skills, knowledge, and competence;

c) the willingness to teach all that one knows to all qualified persons who seek to learn.

Principle 4

As administrators of the professional activities of psychologists and/or other professional persons, psychologists accept and share the responsibilities and ethics of all persons serving in an administrative capacity. These include:

a) primary loyalty to the over-all societal function of the organization which he administers as contrasted to loyalties to the program of any subgroup within the organization;

b) the maximal utilization of the professional competencies of all staff members in achieving the goals of the organization;

c) the maximal freedom of professional behavior of staff members consonant with the good functioning of the organization.

Principle 5

As appliers of their knowledge, skills, and techniques, psychologists recognize that there may be no unique field of application which they can or should seek to monopolize for psychology. In applying their knowledge, psychologists seek primarily to extend or otherwise contribute to societal services already being rendered by members of one or more other professions. This they attempt to do by:

a) contributing to the training of members of other professions;

b) developing new knowledge and techniques of practical value to members of their own and of other professions;

c) sharing the service function of other professions (1) for which psychologists can demonstrate competence, and (2) when the needs of society can be furthered by the contributions of psychologists.

Principle 5.1

Public welfare is advanced by the fact that several professions train their members to adequate competence in the application of various psychological principles and techniques. Psychology as a profession does not believe that it is desirable to attempt to control such practices by legally restricting them to members of any single profession *unless it can be demonstrated that such restriction is necessary for the protection of the public*. Psychology is, therefore, opposed to any restrictive legislation, i.e., licensing, which provides that only psychologists (or teachers, or physicians, etc.) may engage in designated applications of psychological knowledge and techniques.

Principle 5.2

In sharing its applied functions with other professions psychology accepts the responsibility for adopting every feasible means to protect the public from the incompetent or unwise application of psychological knowledge and techniques by members of the profession or by other persons not competent to apply such knowledge and techniques.

Principle 5.2.1. Psychology accepts the responsibility for (a) establishing meaningful standards of professional competence, (b) designating to the public those members of the profession who have met these standards, and (c) effectively informing the public concerning the meaning of the established standards of competence.

Principle 5.2.2. Psychology accepts the responsibility for establishing and certifying standards of professional competence of its own members, but since it also accepts the principle that the applications of psychology are shared with members of other professions, it follows that these other professions should also accept the responsibility of maintaining standards of professional competence of their own members with respect to the application of psychological knowledge and techniques.

Psychology stands ready to cooperate with all other professional groups in devising means of protecting the public from charlatans and quacks in the human relations field.

Principle 5.23. Psychology accepts the responsibility for formulating a code of ethics adequate to protect the public and to enforce this code rigidly among its members.⁴

Principle 5.24. Since the interests of clients dictate that the confidentiality of their communications be protected, psychology (and other professions which serve the public by the application of psychology) are obligated to seek legal recognition of the privileged nature of these communications.

Principle 5.3

In sharing their applied functions with members of other professions psychologists accept the obligation:

a) to abide by all applicable legal provisions surrounding the rendering of such professional service;

b) to know and conform to the traditions, mores, and practices of whatever professional group or groups with whom they work;

c) to collaborate fully with all members of the professional groups with whom a service function is shared.

Principle 5.31. If a psychologist becomes convinced that the conformity behavior involved in collaboration with members of another profession is inimical to the welfare of clients or of society, he will publicly state the basis of his decision not to conform, and work openly to remedy what he considers to be an indefensible practice.

Principle 5.4

Recognizing that the assumption of full professional responsibility requires not only appropriate training but also exceptionally mature professional judgment, psychologists will not hold themselves forth as qualified to function *as psychologists* in independent (i.e., unsupervised and individual)

practice until fully qualified in terms of both training and supervised experience in their specialty.⁵

Principle 5.41. Persons electing to function independently, not as psychologists but in more limited roles, e.g., teachers of remedial reading, speech correctionists, or specialists in a particular testing technique, who do not assume the responsibility for professional decisions may appropriately do so with less supervised experience than is expected of those who hold themselves forth as qualified psychologists. In such instances the individual involved shall limit his professional services to those functions for which he is qualified by training and experience.

Principle 6

As an autonomous profession, psychology cannot accept limitations upon the freedom of thought and action of its members other than limitations imposed by its social responsibility and by considerations of public welfare. The profession must resist moves from any source to establish nonfunctional restraints on the behavior of psychologists whether in the role of teacher, researcher, administrator, or practitioner.

Principle 6.1

The profession of psychology will lend every feasible assistance to any responsible member subjected to undue limitations upon his opportunity to function as a responsible teacher, scientific investigator, administrator, or practitioner.

⁵ The Committee is unanimously agreed that the interests of good practice are best met when psychologists work in close and intimate conjunction with other psychologists and with members of other professions. The best interests of the client, of society, and of the profession seem more likely to be achieved through the cooperative functioning, mutual stimulation, and reciprocal specialization made possible by team functioning whether the members of the team operate on a salaried or fee basis. For these reasons, the Committee is strongly convinced that private independent practice does not represent the most desirable pattern of development for applied psychology. Any psychologist who assumes the tremendous responsibility which independent private practice entails is obligated to convince both himself and his colleagues that he is fully qualified to do so, both in terms of formal training and supervised experience.

⁴ A code of ethics for psychologists is scheduled for official action by the profession at an early date. (Cf. *Amer. Psychologist*, 1950, 5, pp. 620-626; 1951, 6, pp. 145-166, 428-435, 436-443, 443-452.)

Principle 6.2

Psychology as a profession will resist all attempts at restrictive legislation which promises to limit unduly or to abrogate the psychologist's opportunities to function as an independent professional person.

Principle 6.3

As a matter of public policy, psychology will cooperate with any responsible professional organization in combatting any unwarranted limitations on the professional functions of the members of that organization.

IV. RECOMMENDATIONS FOR APA ACTION

1. The Committee recommends that the American Psychological Association adopt as policy the principles stated in Part III of this report.

2. It is further recommended:

- a) that these principles be accepted as guides to the conduct of the Association with respect to all matters involving relations with other professions;
- b) that these principles be incorporated in the psychologist's Code of Ethics for the guidance of the behavior of individual psychologists in their relations with members of other professions.

Respectfully submitted,

Ad hoc COMMITTEE ON RELATIONS BETWEEN
PSYCHOLOGY AND MEDICINE

JOSEPH BOBBITT

ARTHUR W. COMBS

J. McV. HUNT

CARLYLE JACOBSEN

RENSIS LIKERT

FILLMORE H. SANFORD

DAVID SHAKOW

E. LOWELL KELLY, *Chairman*

ORGANIZATION AND OPPORTUNITIES IN SERVICE PROGRAMS OF PSYCHOLOGICAL RESEARCH¹

GLEN FINCH

Scientific Adviser, U. S. Air Force

MANY of the questions in the minds of psychologists today are the same as the questions that were being asked by psychologists in 1941 and 1942. It is my intention to answer some of these questions here, hoping thereby to do four things: (1) to provide some advice to psychologists who are liable to induction; (2) to outline some of the conditions of the military employment of psychologists; (3) to describe the process of getting a job as a civilian psychologist in a military program; and (4) most important from my point of view, to reduce the number of letters that people write to me asking these questions.

The induction picture changes rapidly and I would hesitate to predict that valid specific guidance now will remain valid through the next three months. There are a few items of general guidance that will continue to be valid. These are equally applicable to psychologists and truck drivers. When you are invited to report for induction, take with you substantial evidence of your vocational or professional qualifications. For psychologists, this should include transcripts of undergraduate and graduate credits and letters from major professors establishing your level of psychological competence. These documents should be shown to personnel officers and technicians at every step in the induction process. You probably will not be asked for these documents, so it will be up to you to get them inserted in your record. When you are

interviewed about assignment, do not be too modest about your qualifications nor bashful about what kind of assignment you want. When you are given the Armed Forces Qualifying Test (or any other test or test battery), do your best—no matter how childish you may think the items are. You probably will have no option about the service to which you will be assigned. If you are really keen about Air Force or Navy rather than Army, you should consult your local Recruiting Office to find out whether or not you can enlist in the service of your choice (perhaps I should have said “forced choice”). This call on the Recruiting Office must be before the anticipated date of your pre-induction physical examination. Very rarely, the Air Force can arrange in advance to have an enlistee “earmarked” for assignment to a specific Air Force research unit. A request for permission to enlist for such special assignment must be supported by solid recommendations from the graduate department or employer. Such a request must be submitted well in advance of your expected date of enlistment or of your pre-induction physical. Such requests should be addressed to the Personnel Procurement Division, Deputy Chief of Staff/Personnel, Hq. USAF, Washington 25, D. C.

If you are enlisting or are being inducted, it is not at all out of order for you to write directly to the service research agency to which you would like to be assigned. If you write such a letter, be as informative as possible about yourself and about how, where, and when you expect to enter the service. The research agency may not be able to influence your assignment, but there is no harm in trying.

At present, there is almost no chance that a male nonclinical psychologist can be given a direct reserve or regular commission in any of the military services. Since small quotas may be established from time to time, this may not continue to be true.

¹ This paper was presented at the sixth Annual Conference on Current Trends in Psychology held at the University of Pittsburgh on February 15 and 16, 1952. It will appear in Volume VI of the Current Trends in Psychology series which will be published next fall. The paper will, if necessary, be brought up to date before the volume goes to press. Because of the timeliness of the paper, the author and the University of Pittsburgh have given the *American Psychologist* permission to publish it in this issue.—Ed.

When and if such quotas are established, publicity will be given to the opportunity. The Surgeon General of the Army continues a direct commissioning program for Clinical Psychologists. This program is publicized through university psychology departments. Women psychologists stand a much better chance of being awarded direct commissions in the WAF, WAC, or WAVES.

The Officer Candidate Schools and Flying Training Schools seem to be about the only gates of entry to commissioned service for male psychologists at present except for psychological warfare specialists. Recruiting Stations can provide information on how to get into these schools. I must add that there are other commissioning programs such as the Academy Programs and ROTC that do not provide entry for psychologists with postgraduate training.

Many psychologists hold reserve commissions and wonder about the chances of their being recalled to active duty. Those psychologists who hold primary occupational classifications in some specialty other than psychology are vulnerable to recall as nonpsychologists. The degree of vulnerability depends upon the service requirements for the particular specialty. To insure assignment to psychological work if recalled, a reserve officer should verify that his primary occupational classification is one of the psychological specialties. If it is not, he should request his reserve organization to reclassify him. For those reserve nonclinical psychological officers who have not certified that they volunteer for recall and who are not affiliated with an active reserve organization, there seems, at present, to be little likelihood of recall. Again, this is a fluid situation and may change overnight. Those Air Force company grade reserve psychologists who have volunteered for recall will be recalled as position vacancies become available.

Employment as a civilian in Army, Navy, Air Force, Marines, or other government agency does not, by any means, insure one against either Selective Service call-up or reserve or National Guard call-up. Individual cases are considered for their own merit. This is also true of military contractor's employees. However, it is obvious that the net gain to the military services of calling up someone who is already working for the military is likely to be zero or even negative. Thus there may be better justification for delaying a civilian employee's recall than that of a non-employee.

Some of the older organizations have now become relatively stable. Their recruiting effort is directed largely at replacement. The newer units are seeking employees to fill spaces that have never before been filled.

The Department of the Army has recently negotiated a contract with George Washington University to conduct research on the Army's Human Resources problems. The term "human resources" throughout this paper includes psychology and the social sciences. The George Washington project is called the "Human Resources Research Office" or in governmental gobbledygook, "HUMRRO." Dr. Meredith P. Crawford is the Director. While HUMRRO is only one of many military research contracts, I single it out for special consideration since it is, in many ways, a superlative undertaking. It is the most comprehensive single contract in this area, it is dollar-wise the largest, it is the youngest, it has the most position vacancies. HUMRRO undertakes to conduct basic and applied research and development at Army installations in the United States and overseas on a series of problems ranging from ground forces training to psychological warfare methodology. HUMRRO employment practices are similar to that of other contractors. HUMRRO employees are not Civil Service employees, although HUMRRO does utilize military personnel in conducting its program. For additional information, you should address your inquiries to Dr. Meredith P. Crawford, Director, Human Resources Research Office, George Washington University, Washington, D. C.

All the other organizations that I will mention draw their employees from Civil Service registers. I should like to digress to describe the process of getting on such a register and to correct some of the common misunderstandings about Federal employment.

Most of the psychological positions in government range from grade GS-7 through GS-15. This corresponds to the old P-series grades of P-2 through P-8. Applicants for the two lowest grades (GS-7 and GS-9) are qualified by taking an "assembled" examination. An "assembled" examination in Civil Service jargon is a test (usually written) that is administered to candidates at a specified time and place. Thus, the examination is not "open"—it is administered only when existing Civil Service registers become depleted. Announcements of GS-7 and GS-9 psychological examina-

tions are made by the Civil Service Commission through first-class post offices and university psychology departments. The date of the next examination has not been announced.

Specifications for taking the Civil Service Research Psychologist examination for grades GS-11 through GS-15 are contained in the Civil Service Commission's Examining Circular 9. This can be procured from first-class post offices, Regional Civil Service Offices, or from the Civil Service Commission in Washington. This examination is "open"—i.e., it can be taken at any time. While called an "examination," this is not really an examination. It consists of filling out in detail a Civil Service Form 57, including the providing of a number of references, and of supplying certain specified evidences of research accomplishment. During the present emergency, the Civil Service Commission has undertaken to streamline and decentralize the examining process. Formerly, all applications were evaluated by a Board of Expert Examiners in Washington and registers were created and maintained centrally. The decentralization and streamlining has not proceeded very far as yet. Applicants for positions in the Human Resources Program of the Air Force in the Air Training Command Research Units should submit their examinations to the Joint Board of Expert Examiners, Civil Service Commission, Post Office Building, San Antonio, Texas. At present, applicants for positions elsewhere should follow the instructions contained in Examining Circular 9.

Now for some points that may need clarification. All new Civil Service psychological appointments are "temporary." This means, practically, that new appointees are not subject to the deduction of 6% for retirement, but are instead under Social Security.

Civilian employees are credited with 13 days sick leave per year. Sick leave is unlimited in amount that can be accrued. Annual leave accrues to a maximum of 60 days at the rate of 13 days per year for employees with less than 5 years combined military and Civil Service employment, 20 days for 5 to 15 years, and 26 days for over 15 years of service.

Promotions are of two kinds: "in-grade" which are regular incremental pay increases at 12 or 18 months intervals and "step" which is a promotion from one grade to another. "Step" promotions are

limited in a complicated way by the so-called "Whitten Rider."

The employing agency cannot pay moving costs to point of employment nor from point of employment upon termination.

Very liberal injury and death-in-line-of-duty benefits are provided.

Efficiency is rated on a 3-point unsatisfactory-satisfactory-exceptional scale. Something like 99% of the ratings are in the middle category.

Civilian employees are subject to loyalty-security investigation. This process is not the publicized witch hunt, but is an honest endeavor to protect the employing service.

The normal work week is five eight-hour days. Overtime work is not required by most agencies at present.

From the foregoing, I believe that it is apparent that the conditions of Federal employment are not as liberal (or perhaps the work is "lax") as Congressional critics would have you believe, nor as intolerable as academicians sometimes think.

In addition to the "classified" employment that I have described, there is sometimes opportunity for a graduate student or faculty member to take short-term employment as an "excepted" or "Schedule A" appointee in certain agencies.

The Research Division, Navy Bureau of Personnel, is undergoing some expansion. Inquiries should be addressed to the Director, Research Division, Bureau of Naval Personnel, Washington 25, D. C. Each of the other Navy units has from time to time position vacancies.

In the Air Force Program there are no position vacancies in Hq. USAF. The Human Factors Research Directorate, Hq., Air Research and Development Command, Baltimore, Maryland, is new and almost completely without civilian staff. There are at least four GS-14 and 15 positions open. Inquiries should be sent to the address above.

The Human Resources Research Laboratories will have a small number of position vacancies by the first of July. Inquiries should be addressed to the Director, Human Resources Research Laboratories, Hq. Command, Bolling AFB, Washington, D. C.

The Human Resources Research Institute has a large number of position vacancies for Social Psychologists and Social Scientists. Inquiries should be addressed to the Director, Human Resources

Research Institute, Air University, Maxwell AFB, Montgomery, Alabama.

The Human Resources Research Center has only a few position vacancies at the moment, but it is anticipated that there will be a fairly large number available by the first of April. Inquiries should be addressed to the Commanding Officer, Human Resources Research Center, Lackland AFB, San Antonio, Texas.

The Air Force is planning an expansion of its Human Engineering Research Program. Should these plans mature, there will be a large number of positions open to physiological and experimental psychologists who are interested in equipment problems. Inquiries should be addressed to the Chief, Psychology Branch, Aero-Medical Laboratory, Wright Air Development Center, Wright-Patterson AFB, Dayton, Ohio.

There are a few vacancies for experimental and physiological psychologists at the School of Aviation Medicine, Randolph AFB, Texas. Inquiries should be addressed to the Commandant.

I would strongly urge that those who may sometime want Civil Service employment start their applications now since it sometimes takes months to get on a register of eligibles. I would also urge that those who are now on a register and who have no intention of taking employment soon request the Civil Service Commission to remove their names until such time as they do wish to seek Civil Service employment. "Dead" names on a register effectively delay employment negotiations.

The Human Resources Program of the Air Force supplements in-service projects with contract research. All research contract money is turned over to representatives of field research organizations who are responsible for monitoring contracts. Contract research thus becomes an integral part of the in-service Program.

In the Air Force, there are well over 1,000 people assigned to human resources work. The great bulk of these are military personnel and a fair portion are either administrative or are engaged in test operations. We have found that assignment of experienced Air Force Officers to this Program, whether they have psychological qualifications or not, is essential since such Officers are able to interpret to research workers Air Force problems and requirements and are also able to facilitate greatly the incorporation of research results into Air Force operations. We find that military-ci-

vilian teams function much more effectively than teams composed of either category alone.

The Human Resources Programs cover a wide range of problems. Typical of this coverage is the following listing of Air Force project areas. It should be noted that Army and Navy Programs cover approximately the same areas. Duplication is prevented by coordination at project level and by the fact that the services concentrate on their own peculiar problems. The Air Force has one or more active projects in each of the following:

- Detection, recognition, and interpretation of signals, objects, and speech.

- Psychomotor factors in personnel selection.

- Systematic psychophysical analysis in the planning, development, and evaluation of weapons, countermeasures, and other equipment.

- Psychophysical systems research.

- Flying safety research.

- Ground safety research.

- Basic intellectual traits.

- Basic personality variables.

- Initial screening procedures for recruits and draftees.

- Identification and selection of leaders.

- Classification into enlisted specialties.

- Classification procedures for officer personnel.

- Analysis of the psychological requirements of jobs.

- Criteria of performance.

- Work modification.

- Military manpower requirements.

- Military management.

- Strategic planning and intelligence.

- Psychological warfare.

- Techniques for the modification of knowledge and skills.

- Research on the modification of personality characteristics.

- Economical and effective methods of mass instruction.

- Principles and procedures for selecting the content for military training programs.

- Training of perceptual and sensory functions.

- Conditions of efficient learning and retention of psychomotor skills.

- Training devices.

At this point, I would like to turn to what you may consider a disjointed and unorganized series of observations on military psychology. I should preface this part of my talk with the statement that most of these are my own observations and conclusions and are heavily loaded with prejudice.

Many prospective candidates for Air Force re-

search psychologist positions have expressed to me the worry that their research areas would be narrowly prescribed and that they would have no freedom of choice in selecting the problems on which they would choose to work. They also have fretted about the balance in the Air Force Program between "basic" and applied research. In the Hq. office, staff members have spent many unprofitable hours trying to develop a sound position on these questions and then to rationalize that position. My own conclusion is that these problems are not real problems in the sense that they have reality for the research psychologist in the Air Force Program. I should like to examine for a moment what may be meant by "basic" research. If a research man uses this term to signify research of a nature that shows no promise of eventual application to Air Force operations, then he should worry about taking an Air Force job. If he really means by "basic" research, research that he wants to do, then there is no cause for worry on his part since this Program is broad enough, the Air Force is big enough and self-critical enough to provide interesting, challenging, and significant problems for all the psychologists in the APA. Our concern is not that our research people will do too much research that will lead to generalizable, systematic conclusions which may be directly applicable to the solution of today's Air Force problems. We are much more concerned when our research people direct their efforts only to the solution of today's problems. I think that this can be illustrated by the series of problems that the Air Force must solve in order to incorporate new training devices and simulators into various training curricula. At present, each and every device must be treated as a new problem. Devices are being produced in such numbers that this kind of custom-tailoring would preempt all of our research facilities. Obviously, our research concern ought to be to provide general rules for trainer design and utilization. This requirement to me means that we should divert our research people from working on the utilization of specific devices. We can well leave these problems to our training operations people. Our research people can then be given freedom to work on the basic problems of training equipment. For the Air Force, this should be extremely profitable and for the psychologist most satisfying scientifically.

A recurring problem that the research administrator must face is to decide when an operational

requirement should be attacked with research methods and when it should be left alone. Three dicta help, I think, in reaching this decision. These, I believe, can be substantiated: (1) Research is expensive, (2) research is slow, and (3) research is a gamble. I think that acceptance of these, along with the recognition that psychological research facilities and resources are limited, will lead to the conclusion that military psychological research should be focussed on real pay-off problems and that these are likely to be relatively long-range in character. Those problems that can be solved in a fairly satisfactory way by operating personnel should ordinarily be left to those personnel. The psychologist should work on those things that he and he alone can do best—psychological research.

Too often the psychologist employed to do research for the Air Force finds that he is so successful in advising unit commanders on their daily problems and that he is so warmly received as an expert that he chooses to expertize rather than to do research. This expert may be the same ex-psychologist who worried so exhaustingly about not being given research freedom and about not being allowed to do basic research.

By the foregoing, I do not mean at all to imply that the Air Force Human Resources Research Program should not gear its research to Air Force requirements. My point is that we might look to our systems and equipment planning people for requirements as well as to operations. We may not be able to solve satisfactorily the crew composition problems of the B-29 before the B-29 becomes obsolete. We may be late on the B-50, the B-47. If we are also late on the B-52 and bombers of the future we will have the greatest difficulty justifying our continued existence.

I should like to conclude by pointing out what I think is one of our major psychological illusions. Most of us have looked on the psychological pantry shelf and may have thought the data supply was good. Those cans of psychological know-how, I am beginning to believe, are fairly empty. We are going to have to do more than utilize what little stored up knowledge there is to solve our military psychology problems. Psychology can expect to play an active role in the armed forces only to the extent that the psychological cupboard is replenished and not left bare.

DOCTORAL TRAINING PROGRAMS IN CLINICAL PSYCHOLOGY

Approved By

THE EDUCATION AND TRAINING BOARD, AMERICAN PSYCHOLOGICAL
ASSOCIATION, WITH THE CONCURRENCE OF THE
BOARD OF DIRECTORS

March, 1952

On recommendation of the Committee on Doctoral Education, the Education and Training Board of the American Psychological Association, with the concurrence of the Board of Directors, has approved the doctoral training programs in clinical psychology which are conducted by the institutions listed below. Training programs which have not requested evaluation and programs which have been evaluated but not approved are not included in the list.

Inclusion of the name of an institution in this list indicates approval of doctoral training in clinical psychology only; inclusion or non-inclusion carries no implications for other graduate programs in psychology or for programs of graduate education in other disciplines.

The clinical training programs at the institutions here listed are differentiated by roman nu-

merals (I or II) to indicate over-all differences in the strength or quality of these programs. "I" is the higher rating. Some of the institutions listed were visited in 1951-52; others were visited in 1948-49, 1949-50, and 1950-51. Evaluations of schools not visited in 1951-52 were made on the basis of interim reports submitted by the departments of psychology. Current ratings are therefore based upon the results of the last visit and upon interim reports prepared by each school and submitted to the Committee.

Each of the institutions listed has been reported to the U. S. Public Health Service, to the Veterans Administration, and to the Surgeon General's Office of the U. S. Army as conducting at the present time an approved program of doctoral training in clinical psychology.

Boston University (II)
University of Buffalo (II)
University of California (Berkeley) (I)
University of California (Los Angeles) (I)
Catholic University of America (II)
University of Chicago (I)
Clark University (I)
University of Colorado (I)
University of Connecticut (II)
Duke University (I)
Harvard University (I)
University of Illinois (I)
Indiana University (I)
State University of Iowa (I)
University of Kansas (I)
University of Kentucky (II)
Michigan State College (II)
University of Michigan (I)
University of Minnesota (I)
University of Nebraska (II)

New York University Graduate School of Arts &
Sciences (II)
University of North Carolina (I)
Northwestern University (I)
Ohio State University (I)
Pennsylvania State College (I)
University of Pennsylvania (I)
University of Pittsburgh (I)
Purdue University (I)
University of Rochester (I)
University of Southern California (I)
Stanford University (I)
Teachers College, Columbia University (I)
University of Tennessee (II)
University of Texas (II)
University of Washington (Seattle) (I)
Vanderbilt University (II)
Washington University (St. Louis) (I)
Western Reserve University (II)
University of Wisconsin (I)
Yale University (I)

Comment

Pacifism and Psychology: Further Comments

To the Editor:

We would like to comment briefly on the discussion (*Amer. Psychologist*, August 1951) of our letter on pacifism and psychology (*Amer. Psychologist*, April 1951). Our letter was not intended as an exposition of pacifism. Psychological arguments are part of the pacifist position, but they are by no means all of it: pacifism also involves a certain ethical orientation which cannot be simply derived from psychological facts. Now let us re-examine some of the pacifist arguments in the light of the criticisms raised.

1. We agree that removing frustrations is not the only way of reducing aggression. However, even though international aggression may be based on political and ideological considerations, we must not neglect the frustrations of the population. Both Fascist and Stalinist aggressions have owed much of their success to support from frustrated masses. A realistic peace program must do something about removing these frustrations. At the very least, we must not contribute to them—as we have been doing, for example, in Southeast Asia, by backing corrupt landlord classes and colonial regimes. We do not believe that removing the frustrations of the Russian or Chinese peoples is a sufficient method of stopping Communist aggression, but it is certainly a necessary one. It is unrealistic to rely solely on the containment of Communism by armed force.

2. We agree with Dr. Barry that concessions to aggressive demands reinforce the aggressive response. Force and the threat of force are also useless, however, because they inhibit or displace the aggressive response, but cannot extinguish it. It seems to us that the aggressive response can be eliminated only by reducing the drives which evoke it or by allowing the aggressive response to occur (preferably on a symbolic level) without reinforcement. We think the latter occurs whenever the methods of non-violent resistance are used. For example, pacifists advocate non-cooperation and civil disobedience. In the event of an invasion widespread non-cooperation would be intended to deprive the invader of any "reward" for his aggression. This should make clear the distinction between pacifism and appeasement (which Dr. Barry seems to ignore).

3. We wrote that if America wants to avoid war it must strive to make its actions seem non-threatening. Dr. Barry replied that we should change the perceptions of the rest of the world to conform with reality,

rather than modify reality to produce a desirable perception. "For the latter course," she says, "would encourage more hallucinations." We cannot assume that the rest of the world is hallucinating; especially when we are told by *anti-Communist* American observers, that the dominant feeling in *anti-Communist* European countries is that America wants war! We must ask whether *we do* something which creates the impression that we want war. American propaganda concentrates on how strong and well-prepared America is, and how it plans to use its power to block Communist expansion. If such is our propaganda, how can we expect the rest of the world to *know* that America's intentions are peaceful? (Of course, the problem goes much deeper, since American propaganda merely reflects the policy of containment through force alone, and cannot be changed unless that policy is changed.)

Our main purpose is not to convince anyone of the correctness of the pacifist arguments, but to stimulate discussion, especially of the possibilities for research. We feel that research is desperately needed on the problem of war and peace because our present knowledge seems inadequate for anything approaching a conclusive answer. We are forming a group to explore the possibilities of psychological research on alternatives to war in resolving international conflicts. We would like to hear from anyone interested, regardless of personal leanings. Please write to Arthur Gladstone, Psychology Department, 333 Cedar St., New Haven 11, Connecticut.

HERBERT C. KELMAN
The Johns Hopkins Hospital

ARTHUR I. GLADSTONE
New Haven, Connecticut

The Goals of the APA

To the Editor:

The cold war that has been in progress among psychologists apparently has three sides, rather than just the two of "science versus profession." In its recent statement of a pledge that must be signed by all future applicants for membership in the APA (*Amer. Psychologist*, 1951, 6, p. 591), the Council divides psychology into three parts: (1) a science, (2) a profession, and (3) a means of promoting human welfare. These are listed as being separate and distinct. They are named in the above order.

A profession of psychology that is not a means of promoting human welfare and that is not scientific should not exist. We hope it never will. We would

be very dubious of any candidates who would be willing to sign a pledge to advance such a profession.

A science of psychology that is able to isolate itself from a professional attitude of responsibility for the promoting of human welfare would be useful in a totalitarian society. It can have no place in a democratic society in which the usefulness of psychological knowledge is beginning to be realized.

The application of "psychology" as a means of promoting human welfare, if not based on scientific knowledge and if not geared to a professional level, is the thing that we would least like to see occur.

Is there not a more meaningful way of wording the goals of APA, to indicate that these are three aspects of one unified effort to learn more in order that we may more effectively promote human welfare?

DOROTHY RANSOM
Detroit, Michigan

Should Psychologists Examine Each Other's Motives?

To the Editor:

The disclosures of modern psychiatry and psychology regarding human motivation have placed the scientist in a vulnerable position. He must now admit—however reluctantly—that unconscious emotional influences may color his scientific perspective despite all his efforts at objectivity. This ought to make him more chary than ever of departing from the rigorous criteria for evidence and proof that science has established. On the other hand, this new knowledge presents him with a constant temptation to abandon the traditional methods of logical argument and experimental proof in controversial matters for an analysis of the intents and motives of his intellectual adversaries. The presumption underlying this approach to polemics is that if one can question the motives behind an individual's viewpoints, it is not necessary to consider seriously the viewpoint itself. No one will fail to recognize that the genetic fallacy is inherent in this position, and while this has been thoroughly discredited as a logical procedure, it nevertheless has a strong appeal. The lure is perhaps greatest for those engaged in the psychological disciplines since they are especially conversant with the principles of dynamic psychology and particularly sensitive to the frailty of human reason.

In any event, the practice of discussing issues in personal terms seems to be creeping into the psychological literature, and while this practice is not entirely new, the recent development of clinical psychology has apparently produced an exacerbation of it. Three examples of this appeared in the *American Psychologist* during one year (1950) alone, and the contributors to

this journal are not the only ones indulging in this behavior. One might be inclined to regard such instances merely as lapses in judgment, not serious enough to warrant concern. However, the suspicion that they are expressions of a regrettable trend is reinforced by the recent statements of a man respected as a leader in psychology. William A. Hunt in an address to the Division on the Teaching of Psychology has openly called upon psychologists to bring the practices of the consulting room to the forum of public debate. Essentially Hunt's position is that it would help psychologists to arrive at common agreement by examining their differences of opinion in the light of each other's motives. He states:

We grant them [our colleagues] a "presumption" of depersonalization which often is as unreal as the clinical depersonalizations we are called upon to handle in our patients. In overlooking the influence of personality on science, our attitude is strongly reminiscent of the Victorian attitude of American psychiatry during the first quarter of this century to the "unpleasant" realities of psychosexual development. Yet the behavioral phenomena exist, and cannot be removed by the comfortable mechanisms of repression. . . . We must examine our own motives and their influence upon our psychological behavior. We must ask our classical colleagues "Why a rat man?" and then turn to ourselves and ask "Why a clinician?" The answer will always involve our developmental history as emotional organisms. Someday a new Freud may write a new "Future of an Illusion," dealing with psychological theory as a defensive mechanism against insecurity and the demands of the cold, hostile world of nature. Today we can only point to the problem. (Hunt, W. A. On the teaching of clinical psychology. *J. clin. Psychol.*, 1950, 6, 143-148.)

From the logical standpoint this kind of thinking seems inevitably to entangle one in an infinite regress since each explanation of someone's motives is motivated and must in turn be explained. However, even more serious is the error which lies in the assumption that this procedure will inevitably lead to a greater degree of mutual understanding among psychologists. What seems more likely is that persons with divergent viewpoints will simply examine each other's truth claims—each in the light of his own motivational system—thereby avoiding the problem of testing each system in terms of independent and objective criteria.

This is exemplified by Hunt himself, who examines the behavioristic views of Watson and Skinner in the context of their motives. While this analysis is done with the express and admirable intention of substituting cognitive communications for emotive ones in psychology, one could hardly be surprised if the gentlemen submitted to this careful dissection were to respond with somewhat emotive rejoinders. A discussion of the personalities of Watson and Skinner is of no help in determining the usefulness of Behaviorism as a theo-

retical system of psychology. The test for this theory, as for any other, lies in its effectiveness in systematically accounting for the world of behavioral events. Criticism of a theory must, therefore, be based not on the personal idiosyncrasies of its proponents, but on an appeal to the world of phenomenal reality, which in this case will, of course, include intrapsychic events. Unintentional bias is well understood in science, which is one of the reasons for insisting that an investigator support his contentions with demonstrable evidence before they can be afforded recognition.

The insistence that the discussion of personalities be avoided in scientific polemics should not be construed as a denial of the legitimacy of studying the relation between a man's personality and his work. This is obviously desirable in biographical studies, and essential in studies which focus on the origin and development of a man's ideas; but while such studies may be the source of much valuable psychological material, they do not constitute a test of the validity of any given viewpoint.

The revelations of dynamic psychology are a heady wine, and psychologists must beware of losing their sobriety. Science provides the methods for discovering the truth or falsity of an investigator's views. If these methods are incapable of resolving an issue, it is sanguine to expect an examination of individual motives to do so. On the contrary, the history of ideas has shown that the injection of personal issues only leads to dissension and the growth of intensely partisan schools. Vituperation takes the place of objective discussion, and the truth is obscured by the dust of battle.

SAMUEL WALDFOGEL

Massachusetts General Hospital

What Does APA Fellowship Mean?

To the Editor:

What does Fellowship in the APA mean? For seven years I have enjoyed that status and thought I knew what it meant. But at the last meeting of the Council of Representatives I found I did not.

The candidacy of a person who was being recommended for Fellowship by two divisions (one of which has just published a statement in its Newsletter to the

effect that "membership . . . intimates the possession of certain qualifications deemed necessary for adequate professional functioning . . .") was questioned by one Representative (not myself). A third division had withheld action on the candidate until complaints about him could be thoroughly investigated. No names were mentioned in Council, but a closeted consultation disclosed that the candidate was known to the Board of Directors as being "in a slightly bad odor." This last phrase was used several times in Council discussion. It seems that the person in question (I do not know him) has repeatedly been guilty of questionable practices, that his state association has repeatedly remonstrated with him, that he has repeatedly promised not to repeat, and that he has continued to offend in *new* ways.

Despite knowledge of these facts the Board of Directors recommended his election to Fellowship status on the grounds that he met technical requirements. When it was suggested in Council that, Fellowship status being slightly honorific, we should also expect candidates to be surrounded by a good, rather than a merely slightly bad, odor, the suggestion drew only laughter. The Council voted 23 to 12, if I remember correctly, to approve the applicant's elevation to the status of Fellow.

Apparently I am in a minority. But if so, why do we have a Committee on Ethical Standards and another on Scientific and Professional Ethics? Do Fellows pay extra dues in order that their names may be listed along with those of psychologists who persist, despite repeated warnings, in surrounding themselves with "a slight odor"?

What is Fellowship in the APA intended to signify: merely technical competence and experience, or professional standing?

DONALD E. SUPER

Teachers College, Columbia University

The Board of Directors has been concerned with the problem raised in Dr. Super's letter. At the March Board meeting the problem was discussed and recommendations for Council action were made. These actions are presented in Across the Secretary's Desk on page 164 of this issue.—Ed.

Across the Secretary's Desk

The March Meeting of the Board of Directors

The APA Board of Directors convened for its spring meeting on Thursday, March 20, and stayed in session during most of the waking hours until 4:00 P.M. on Sunday, March 23. The meeting was held at the Michigan Union in Ann Arbor, a site geographically, economically, socially, and architecturally suitable for such purposes. The following paragraphs present some of the highlights of the Board's discussions and decisions.

COMMITTEE AND OTHER REPORTS

Treasurer. The treasurer reported a deficit of about \$13,000 for 1951 operations. While most of the 1951 items of income and expense were close to the amounts anticipated in the budget, the 1951 Directory cost \$14,000 more than expected. The Directory, in spite of rising print costs and increased personnel expenses, was produced at a total cost of about \$2.85 a copy. Such a cost seems reasonable in the present economic setting for a book containing 639 pages of material that is expensive both to edit and to print, but the total cost for 12,000 copies was still considerably greater than anticipated. This one item is sufficient to account for the 1951 deficit.

Committee on Public Relations. This committee recommended that the Association procure the services of a person to prepare press releases on papers presented at the annual meeting and that other mechanisms be established to facilitate adequate and accurate press coverage of our convention. After considerable general discussion of the philosophy and problems of public relations, the Board voted to allocate \$1,000 for an "experiment" in public information this year. The Central Office was instructed to design and execute procedures whereby (a) for some "newsworthy" papers press releases would be prepared and distributed to reporters, (b) for an equivalent sample of "newsworthy" papers, reporters be given only copies or abstracts of the paper and (c) the value of prepared releases be assayed through a check on the articles actually getting into print in a selected group of newspapers.

Advisory Committee on Legislation. This committee presented a report to the Board outlining

some of the many facets of the problem of legislation and recommending that the APA move toward the adoption of an official policy with respect to legislative matters. While members of the Board did not feel ready at this time to attempt the articulation and recommendation to Council of official policy with respect to legislation, the Board did conduct straw votes on various aspects of the legislative problem and gave the Executive Secretary permission to publish the straw results here. The issues posed and the informal results are as follows:

1. APA should develop a general policy concerning legislation affecting psychologists.
2. APA should not attempt to initiate or stimulate legislation for the "protection" of psychologists.
3. APA should take action to prevent legislation designed to limit the rights of psychologists.
4. At the present time, laws allowing for the certification of psychologists are more desirable than laws demanding the licensure of psychologists.
5. Legislation that does not attempt to certify or license specific kinds of psychologists is more desirable than legislation that attempts to discriminate among various specific fields of competence.

These straw votes represent the Board's best present thinking about legislative matters. The Advisory Committee on Legislation was commended for its provocative report and was asked to make copies of the report available to groups concerned with legislative problems. (When the report is ready, it can be obtained by writing to the Central Office.)

Ad Hoc Committee on Relations with the Medical Profession. This committee presented to the Board a revision of the report that has been widely circulated in tentative form among psychologists and members of other professions. The Board, after protracted discussion of both the content and potentially great significance of the report, voted that the first and more general part of the report be published immediately in the *American Psychologist* and that the committee be asked to consider a further revision of the second part of the report dealing specifically with the relations between psychiatry and psychology. (The first section of the report appears in this issue.)

The Board expressed the hope that all APA members will study the report and that reactions from individuals and from APA divisions will be received so that preparations may be made for action by the Council of Representatives in September. (Such reactions can be sent to the Central Office or to E. Lowell Kelly, Chairman of the Ad Hoc Committee.)

Education and Training Board. The Education and Training Board presented an extensive report of extensive progress up to and through its February general conference at Ann Arbor and made a number of specific recommendations for action by the Board of Directors. Among the actions of the Board of Directors were the following:

1. Concurred in the E&T Board's recommendations regarding the classification of schools with respect to training in clinical psychology. (The list of approved schools appears in this issue of the *American Psychologist*.)

2. Approved the E&T Board's recommendation that the Committee on Psychology in other Professional Schools be made a special rather than a standing committee of the E&T Board.

3. Approved the E&T Board's recommendation that there be established a special Committee on the Teaching of Psychology in High Schools.

4. Approved the E&T Board's recommendation that there be created a standing Committee on Postdoctoral Education.

5. Moved to express the judgment that problems of predoctoral education should be transferred to the Committee on Doctoral Education and that the Committee on Subdoctoral Education should confine itself to a concern for terminal subdoctoral training.

6. Approved the E&T recommendation that institutions giving training in psychology consider the desirability of bringing the statement of the Committee on Ethical Standards for Psychology to the attention of all graduate students in psychology.

American Psychological Foundation. The Board voted to transmit to Council the recommendations of the Committee on an APA Royalty Fund for the establishment of an American Psychological Foundation. The idea is that this Foundation, set up as a separate corporation, will receive contributions from psychologists and others and will give financial support to projects and activities not normally supported by the APA. In the meantime, the Executive Secretary was instructed to confer with the APA attorney about the incorporation of the Foundation.

THE INTERNATIONAL CONGRESS OF PSYCHOLOGY

At the Chicago meeting the Council voted that "the International Congress of Psychology and the Canadian Psychological Association be invited to meet with the APA [in 1954] if the McCarran Act is modified in such a way as to avoid embarrassment to APA guests." The McCarran Act has not been modified and there seems to be no indication that it soon will be. Consequently, the Board voted to join with the Canadian Psychological Association in carrying out the plan, earlier initiated by CPA, whereby CPA and APA would be joint hosts for a 1954 meeting of the International Congress in Montreal. (Since the Board meeting, the CPA has expressed its willingness to reinstate its original plan. A joint invitation has gone to the executive committee of the Congress. We should soon know if the available space and dates in Montreal are judged by the executive committee to be suitable.)

FUTURE MEETINGS

The Board instructed the Executive Secretary to investigate Cleveland, Los Angeles, San Francisco, and Denver as possible sites for the 1955 annual meeting and to report his findings to Council of Representatives for a September decision.

The Board also instructed the Executive Secretary to worry about the problems we will face in 1953 when we go again to an academic setting for our meetings. Psychologists in conclave have a set of mores not precisely like those which characterize educational institutions or which people expect, perhaps, to characterize anybody. It is clear that we will in 1953 have a meeting considerably more economical and in many ways pleasanter than one in a metropolitan setting. It is also clear that we will have to be more aware of our host's preferences than is the case when we use the facilities of large hotels.

COMMITTEE SLATES

The Board spent its usual full day preparing slates of nominees for election to the various APA Boards and Committees. This year the Board had the benefit of suggestions from many members of the Council of Representatives and from divisional officers. The slates for most boards and committees will be presented to the Council for mail balloting during the summer so that the newly elected

members can meet with old members during the annual convention.

ADDITIONAL NEW ASSOCIATES OF THE APA

The Board of Directors announces that the following nine persons were elected Associates of the American Psychological Association as of January 1, 1952, after special action of the Board at its March meeting. This brings the total of 1952 Associates to 1426.

Bernstein, Owen	Lussier, Sister Mary Albert
Eisenstein, Herbert S.	Nagel, Jerome H.
Johnson, Lawrence Jerry	Raines, Shirley
Jonas, Richard O.	Robinson, Richard G.
Louis, Nicholas B.	

FELLOWSHIP IN THE APA

Upon the instructions by the Council of Representatives last September, the president appointed a subcommittee of the Board of Directors to study the procedures for election to Fellowship and to make recommendations concerning, among other things, ways to meet the problems created when a member of doubtful ethical standards applies for Fellowship.

This subcommittee (Mowrer, chairman, Thorndike, and Shaffer) presented several suggestions and was instructed to prepare formal motions to be brought to the Council in September. These motions will propose a revision of procedures so that a member may apply for Fellowship at the end of four years of professional experience subsequent to the granting of the doctoral degree, but will not be elected until the end of his fifth year. The year's delay will enable divisional and APA membership committees to conduct whatever investigations seem desirable.

For 1952, the Board voted to post in a prominent place at the annual meeting the names of those applying for Fellowship, along with the names of their sponsors. All members will be requested to communicate to a member of the Board or of the Council any objections to the election of anyone on the list. If there are a number of objections to any one person, his application can be tabled for a year.

PUBLICATION MATTERS

A New Directory. The high cost of the 1951 directory prompted the Board to discuss at some

length ways of reducing costs and maintaining the usefulness of an annual directory of our membership. Several members of the Board favored a plan whereby no 1952 directory would be prepared but that we aim for a 1953 directory to appear early in the year and to contain the names and addresses of new 1953 Associates. The Central Office was instructed not to begin preparation of the directory until there is an investigation of the feasibility of using an IBM procedure to keep our membership records and to assist in the printing of an up-to-date address list.

Publication Costs to Authors. The Board discussed the general problem of steadily increasing publication costs and valiantly tangled with the problem of reducing the costs to authors who publish in our journals. The present procedure of charging the author one-half the cost of tabular and other special material puts considerable hardship on some authors. Also the September action withdrawing the practice of supplying free reprints to authors adds to the author's burden. As happens again and again, the Board found itself caught between the devil of publishing costs and the deep sea of publishable articles. From this position, the Board instructed the Publications Board to study both the philosophy and economics of charges to authors and to prepare recommendations for possible Council action in September. The Board also instructed the Finance Committee and the Executive Secretary to re-examine the actual costs of our publications, with a special focus on editorial, administrative, and overhead allocations, to determine whether the APA is supporting our journals or our journals the APA.

THE PLACEMENT SYSTEM

During the winter the Board of Directors and the Central Office engaged in extended correspondence about the APA Placement System. The existing "personalized" system, while having many advantages, has become very expensive of time and money as our membership and the number of registrants have increased. The Board discussed this matter further at its meeting and instructed the Central Office to devise a procedure whereby (a) placement activities at the annual meeting are continued, (b) an employment bulletin, carrying both "situations wanted" and "situations available" notices is issued periodically by the Central Office. George Albee, the APA placement officer, has al-

ready outlined a plan for publishing the bulletin and has checked its details with the Board of Directors. By May 15, the first bulletin will probably be in the mail. Individual psychologists who wish to find positions or to fill them can insert anonymous notices in the bulletin. The Central Office will work to bring about mutually profitable contact between jobs and job applicants but this will be done without the elaborate and personalized routines formerly used. On the principle that users of the placement service should bear a portion of its costs, any member who wishes to insert in the bulletin a fifty-word notice of his own availability and competencies will be charged a fee of one dollar. A member, for a dollar fee, may subscribe to the bulletin (probably semimonthly) for a six-month period. Employers and present registrants will soon receive detailed information about the use of the bulletin. Such a bulletin may well prove more useful and less expensive than the former system.

GOVERNMENTAL SECURITY PROGRAMS

In response to a request from SPSSI, the Board considered possible APA action with respect to the potentially harmful effects on science of present governmental procedures for insuring the security of information. The Board, after prolonged discussion, instructed the Executive Secretary to investigate among other scientific groups the experiences with and attitudes about security procedures, with an eye to the possible initiation of a joint study of the problem and the formulation of adaptive joint action.

INTERNATIONAL RELATIONS

From various sources the Board received suggestions for more active APA facilitation of international contact and communication among psychologists. One suggestion was that APA initiate a request for foundation funds to support a program of international scholarships and fellowships in psychology, a program designed to supplement existing governmental programs. Another member wants the APA to take a more active and hospitable hand in planning the itineraries of psychologists from abroad when they visit this country. These suggestions were given informal endorsement by the Board and referred to the Committee on International Relations.

THE MCCARRAN ACT

The Board instructed the Executive Secretary to write to the New York Convention and Visitors Bureau and to the Penn Zone hotels in New York informing them that, because of the McCarran Act, the APA would not invite the International Congress of Psychology to meet in New York in 1954. Copies of the letter are to be distributed appropriately.

The Board also voted to concur strongly in the following resolution, adopted in December, 1951, by the American Association for the Advancement of Science.

The Council of the American Association for the Advancement of Science is profoundly disturbed over the present world conditions which so severely impede the free interchange of knowledge even among friendly nations. Danger to the future of our nation is implicit in such restrictions.

The Council recognizes the need for measures which will effectively safeguard our security, but expresses its troubled concern over the manner in which such measures, in particular the McCarran Act, are being administered, to prohibit American citizens from going abroad and citizens of other nations from coming here to interchange knowledge of science which does not affect security.

The Council strongly urges that the administrative procedures under the McCarran Act be reviewed and modified so as to minimize injustices and to increase both our internal strength and our prestige abroad.

The Council further urges revision and improvement of the relevant portions of the Act, to retain the objectives of necessary security, but with adequate provisions to maintain free interchange of knowledge that has no security implications.

APA GOVERNMENT

The Board spent considerable time discussing ways in which informed and concerned participation in APA affairs can be increased. The discussion focused on the Council of Representatives and on adaptive procedures to prevent Council members from either becoming or feeling like mere rubber stamps. Among the suggestions advanced were the following.

1. Maybe divisions should change their by-laws so that their presidents and secretaries are members of the Council. Presidents and secretaries are generally informed and involved.

2. Maybe divisional presidents and secretaries, in the interest of broadening participation, should never be members of Council, but should put pressure on elected repre-

sentatives to attend Council meetings and to stay informed on issues facing the Association.

3. Maybe we should publicize the fact that Council meetings are open so that more members will attend.

4. Maybe the non-attendance at a Council meeting of an elected representative should be equivalent, except in the case of illness or an act of God, to resignation.

5. Maybe each representative should, when he accepts nomination, sign a statement that he will dutifully attend Council meetings and serve faithfully as a member of APA's governing body.

6. Maybe we need to use positive measures instead of the various whips suggested above. One thing the President and the Central Office can do is to send more interim information to Council members, thereby keeping them informed of what is going on and reminding them that the Council is APA's real government. In fact, maybe the Board ought to instruct the President and Executive Secretary to do things to keep Council members better informed. So moved.

BUILDING BUSINESS

APA has signed a provisional contract for the purchase of a building at Sixteenth and O Streets, N. W., in Washington. If the District of Columbia Board of Zoning Adjustment grants us an occupancy permit, we will verily and finally own a building.

On the assumption that we will be granted such a permit, the Board (a) engaged in wonderful fantasies about what the building can be when refurbished and (b) gave the APA House Committee general guidance concerning the style and manner

in which the building is to be prepared, if purchased, for APA occupancy.

The building was once a mildly fabulous private home. It is now in a miserable-looking state of repair, having been vacant for two or more years. Structurally and fundamentally, however, our architect says it is sound. It can be put in excellent shape at a reasonable cost and in a reasonable time. If the Zoning Board smiles on us, APA members will soon hear in detail about the property, for, in accordance with Council action in Chicago, every member of APA will be invited to contribute negotiable material to the project of making concretely and usefully actual the property's potentialities.

A BOOKLET ON CAREERS IN PSYCHOLOGY

The Central Office was instructed to get busy as soon as possible on the preparation of a booklet describing the training and work of various kinds of psychologists. The idea is to make such a booklet available for high school vocational counseling programs, to college undergraduates, and to others who may have or need ideas about a career in psychology. During the past several years various plans for producing such a booklet have been formulated but each formulation, for one reason or another, has broken down. Now the Board wants the Central Office staff to give the project a high priority and to get about its execution.

Notice to Members in California

Neither snow nor rain nor heat nor gloom of night stays—for long—the mailing of the *American Psychologist*. Fire, however, can interfere with its safe transit to readers.

On April 21 the attention of the Central Office was forcefully called to the fact that many California subscribers failed to receive the February issue of the journal. Investigation revealed that the California address list left this office on schedule. Evidence seemed to indicate that the journals were properly inserted in the mails by the printer. It seems a good assumption that by the last week in February the issues bound for California had progressed as far as Ogden, Utah, and were aboard an eleven-car mail train that was burned almost completely when it had an encounter with a gasoline truck.

The February issue contained the annual Call for Papers. A number of California members were seriously discommoded by the failure to see this announcement. The APA Program Committee has done everything possible to see that abstracts which California people wished to submit were considered. In the face of fairly inexorable deadline, however, not much could be done. Those members who were unable to send in their abstracts on time perhaps will have to adopt an Act-of-God resignation.

We will try to replace the destroyed issues. If the California members who failed to receive the February issue and who still want it will send us post cards, we will mail out replacements as long as the supply lasts.

Notice to Members in Buffalo

A bundle of thirty copies of the April issue of the *American Psychologist*, apparently bound for Buffalo, was returned to the printer in a badly burned condition. If subscribers in Buffalo who failed to receive the April issue will let us know about it, we will replace the burned with new copies of this inflammable journal.

Psychological Notes and News

Beth L. Wellman, professor of psychology at the State University of Iowa, died March 22, 1952, after an operation. Her family and the staff members of the Iowa Child Welfare Research Station have established a memorial fund in her name. This will go toward the Bird T. Baldwin-Beth Wellman Reading Room at the State University of Iowa, and will be expanded to make readily available to graduate students in child welfare and psychology current psychological and developmental publications. Any contributions may be addressed to the Iowa Child Welfare Research Station, State University of Iowa, Iowa City, Iowa.

James J. Gibson, Cornell University, was awarded the Warren Medal by the Society of Experimental Psychologists at its annual meeting, Arden House, Columbia University, April 11, 1952. The citation for the award was as follows:

The Howard Crosby Warren Medal is awarded to James J. Gibson for his many studies, culminating in his book, *The Perception of the Visual World*, directed upon fundamental as well as very practical problems in the field of perception. His book is one of the few important works ever done on the central, neglected question as to how man comes to know the world about him.

The American Board of Examiners in Professional Psychology, Inc., announces herewith the award of its diploma to another eleven psychologists in the indicated professional specialties. To date, this represents a total award of 1075 diplomas.

These awards are distributed as follows:

Diploma awarded to senior members of the American Psychological Association with waiver of written and oral examinations	1038
Diploma awarded to members of the American Psychological Association by satisfactory performance on written and oral examination	28
Diploma awarded to senior members of the Canadian Psychological Association with waiver of written and oral examination	9
Total	1075

In eight previous issues of the *American Psychologist* (Vol. 3, No. 5, May 1948; Vol. 3, No. 8, August 1948; Vol. 4, No. 6, June 1949; Vol. 4, No. 8, August 1949; Vol. 5, No. 6, June 1950; Vol. 5, No. 11, November 1950; Vol. 6, No. 8, August

1951; Vol. 7, No. 1, January 1952), the Board has announced the award of its diploma to 1036 senior members in professional fields of psychology on the basis of a review of individual qualifications and without written and oral examinations.

The award of diplomas to 28 candidates who have qualified by satisfactory performance on written and oral examinations has been separately announced in the *American Psychologist* (Vol. 6, No. 3, March 1951; Vol. 6, No. 8, August 1951).

The 1064 awards previously announced together with the 11 awards presently announced bring the total number of awards to 1075.

The new diplomates are as follows:

Name	Field
Bundas, Lourene E.	Clinical Psychology
Burri, Clara	Clinical Psychology
De Koker, Mary	Clinical Psychology
Escalona, Sibylle	Clinical Psychology
Friedrich, Jeannette	Clinical Psychology
Gottlober, Abraham	Clinical Psychology
Henderson, Mack T.	Counseling and Guidance
Horlick, Reuben	Clinical Psychology
Long, Lillian D.	Industrial Psychology
MacMinn, Paul	Counseling and Guidance
Morgan, Clellan	Clinical Psychology

Leslie F. Malpass has recently accepted an appointment as assistant professor of psychology at Southern Illinois University, Carbondale, Illinois. For the past three years Dr. Malpass has been clinical psychologist with the Onondaga County Child Guidance Center located in Syracuse, New York.

Leonard Hassol is now the clinical psychologist for the juvenile delinquent therapy program of the Berkshire Farm School, Canaan, New York.

Elias N. Abrams has been transferred from the position of clinical psychologist in the Mental Hygiene Clinic, Veterans Administration Regional Office, Newark, New Jersey, to that of assistant chief clinical psychologist in the Mental Hygiene Service, Veterans Administration Regional Office, Brooklyn, New York.

Mortimer H. Applezweig, assistant professor of psychology at Wesleyan College, will become as-

sociate professor and chairman of the department of psychology at Connecticut College, effective September 1, 1952.

Captain Thomas A. Norris, on leave of absence from the staff of Boston University, is serving as a personnel psychologist at the Armed Forces Examining Station, Boston Army Base, to which he was transferred from the Classification and Assignment Section, Reception Center, Fort Devens, Massachusetts, where he served as executive officer.

Eva Neumann, formerly a graduate assistant at Brown University and a fellow at Bryn Mawr College, is now research associate in psychophysiology at the Emma Pendleton Bradley Home in Riverside, Rhode Island.

Marie Skodak is the program chairman of the Division of Consulting Psychology, and not Harold M. Hildreth as listed in the February *American Psychologist*.

The University of Houston announces the appointment of Wayne Dennis as visiting professor for the summer, 1952.

The second annual symposium in psychology will be held at the University of Houston, June 9 through July 18. Child development will be the topic of discussion and the symposium staff will include Virginia Axline, Daniel Prescott, Louise Bates Ames, Helen Thompson, Jules Henry, and John E. Anderson.

Newly elected officers of the Eastern Psychological Association are Neal Miller, president; G. G. Lane, secretary for a three-year term; Stuart W. Cook and Fred S. Keller, members of the Board of Directors for a three-year term. Carl Pfaffman was elected to the Board of Directors to fill out Neal Miller's term.

The National Science Foundation has awarded 569 predoctoral fellowships and 55 postdoctoral fellowships for the academic year 1952-53. Of these numbers five predoctoral fellowships and four postdoctoral fellowships have been awarded to psychologists. Predoctoral fellowships were awarded to Matthew J. Wayner, Jr., Warren J. Wittreich, Abby Bonime, Philip Teitelbaum, and Willard F. Day; postdoctoral fellowships were awarded to William C. Sayres, Robert M. Boynton, Orley T. Law, Jr., and Carl E. Sherrick, Jr.

Predoectional applicants were required to take fellowship examinations administered by the Educational Testing Service for scientific aptitude and achievement. The test scores, academic record, and recommendations regarding each candidate's abilities were then considered by panels of outstanding scientists in the respective fields of the candidates. This part of the selection procedure was administered by the National Research Council under contract with the Foundation. Postdoctoral applicants were not required to take examinations, but their records and recommendations were also screened by panels of eminent scientists in each field in an evaluation procedure administered by the National Research Council.

Stipends vary with the academic status of the fellows. First-year fellows receive a basic annual stipend of \$1,400; second-year fellows receive \$1,600; advanced predoctoral fellows receive \$1,700; and postdoctoral fellows receive \$3,000. Second-year, advanced predoctoral, and postdoctoral fellows receive additional allowances for wives and children. Normal tuition and laboratory fees are paid by the Foundation and limited allowances aid in defraying the costs of travel are provided.

Fellows are expected to devote full time to advanced scientific study during the tenure of the fellowship. They are not committed to accepting future employment with the Government, nor is the Government committed to offering employment to any fellow.

It is expected that the announcement concerning National Science Foundation Graduate Fellowships for 1953-54 will be made about October 1, 1952. Application forms will be available about that time.

The American Friends Service Committee is experimenting with a series of monthly, informal discussions, involving persons doing significant new research on various aspects of international relations and a small group of key government officials, responsible for the administration of overseas programs. The group meets in Washington, D. C. at the Davis House of the AFSC to examine ways of strengthening American impact upon other countries and peoples. The current series of meetings has given particular emphasis to new research in the various fields of human relations, especially social psychology. Among the topics which have

been under discussion are national images and stereotypes, aspirations and anxieties of youth in various cultures, Americans as administrators and technicians abroad, implications of recent group relations research for international affairs, promising new approaches to the strengthening of the effectiveness of Americans abroad, and the relation of values and objectives to international action programs.

Among the social scientists who have met or are scheduled to meet with the group are Gordon W. Allport, Hadley Cantril, Cora DuBois, George Gallup, Richard Heindel, Otto Klineberg, Gardner Murphy, Alexander Leighton, Rensis Likert, Ivan London, Robert Felix, Philip Jacob, and John Useem. Clarence E. Pickett and Gilbert White represented the AFSC at these sessions. Harold E. Snyder of the American Council on Education, has been serving as part-time director of the project.

Fellowships of the Fund for the Advancement of Education, established by the Ford Foundation, have been awarded to several psychologists. They include Charles H. Bumstead, Henry V. Cobb, William F. Dukes, Jack R. Gibb, Susan W. Gray, Cyrus W. Lagrone, Frank Laycock, Bing-chung Ling, Richard Littman, Tarmo A. Pasto, Harry G. Schrickel, Virginia M. Staudt, and Clarence L. Winder. The purpose of the fellowships is to enable recipients to become better qualified to teach. Research is supported if it bears directly on the effort to improve teaching by broadening or deepening the teacher's understanding of his own or related fields.

The University of Buffalo will grant its first two doctoral degrees in psychology in June. A program leading to the PhD was begun by the department of psychology at Buffalo in 1948. Of these first two degrees, one will be in the experimental area and the other in clinical psychology.

Two workshops in the Rorschach method of personality diagnosis and other projective techniques will be held this summer at Claremont College. They will be conducted by Bruno Klopfer and Evelyn Troup. Workshop A, which will be held August 4 to August 16 at Claremont College, will include introductory seminars for beginners who have had no previous training in projective techniques. Workshop B will be held at the

Asilomar Conference Grounds, Pacific Grove, California, August 19 to August 29. Successful completion of Workshop A qualifies a student for Workshop B. Intermediate and advanced seminars will be given at both workshops. To apply for admission, write to Dr. Bruno Klopfer, 480 Redwood Drive, Pasadena, California, by July 1, 1952.

A workshop for counselor trainers will be offered from June 2 to June 13 at New York University's School of Education. Enrollment will be limited to a selected group currently engaged in full- or part-time counselor training. Robert Hop-pock is director of the workshop and staff members are Milton Schwebel, William D. Wilkins, and Philip J. Zlatchin.

APA Committee and Board Activities. Two APA committees met at the same time as the Midwestern Psychological Association this year in Cleveland. They were the Council of Editors and the Committee on Test Standards. The Policy and Planning Board is holding its annual meeting this year on May 15-18 at Vassar College.

Psi Chi, national honorary society in psychology, will hold its annual convention in Washington, D. C., during the APA sessions. The national council meeting has been tentatively set for September 4 and the chapter's luncheon, business meeting, and program of student research papers for September 5. Definite dates will be announced later. All interested persons are invited to attend the luncheon and program of research papers. Student members of Psi Chi who are interested in presenting papers are asked to submit abstracts to Mrs. Bertram R. Forer, National Secretary-Treasurer, 2170 E. Live Oak Drive, Los Angeles 28, California by August 1, 1952.

Psi Chi announces that the Britt Foundation, Inc., has again this year offered to make a grant-in-aid through the society to assist some graduate student or students in conducting a research project. The award, which will be increased to \$200 this year, will be presented December 15, 1952. Application blanks, which must be returned by November 15, 1952, may be obtained from Mrs. Bertram R. Forer, National Secretary-Treasurer, Psi Chi, 2170 E. Live Oak Drive, Los Angeles 28, California.

Britt Foundation's award for 1951 was presented to Thomas M. Magood, Donald Hoyt, and Carl

Jesness, members of the University of Minnesota chapter.

Graduate stipends for 1952-53 at Richmond Professional Institute, a Division of the College of William and Mary are: scholarships, \$100-\$500; dormitory counselors, \$250-\$500 in form of room and board; research assistantships, \$450; and teaching fellowship, \$800. Application forms, which must be completed by June 1, may be obtained from the Director of School of Clinical and Applied Psychology, Richmond Professional Institute, 901 West Franklin St., Richmond 20, Virginia.

The Bureau of Medicine and Surgery of the Department of the Navy has recently announced that commissions for psychologists are available in the Medical Service Corps, U. S. Naval Reserve. The Medical Service Corps is particularly interested in receiving applications from psychologists who are receiving their master's or doctor's degrees this spring in the fields of experimental, industrial, personnel or applied psychology, or in statistics.

Psychologists interested in applying for these commissions should contact the nearest Office of Naval Officer Procurement, stating that they wish to apply for a reserve commission in the Medical Service Corps, Specialty—Aviation (Experimental) Psychology. Reserve Naval Officers should apply for a Change of Classification from their present designator to Medical Service Corps, designator 2305. Reserve officers of military services other than the Navy should consult the Bureau of Naval Personnel Circular Letter No. 196-50 for information on how to apply for these commissions.

The Committee on the Mathematical Training of Social Scientists is currently at work on the preparation of problem and source materials for the mathematical training of social scientists. The Committee includes representatives from the following associations and societies: American Anthropological Association, American Economics Association, American Educational Research Association, American Farm Economics Association, American Political Science Association, American Psychological Association, American Sociological Society, American Statistical Association, Econometric Society, Institute of Mathematical Statistics, Mathematical Association of America, and Psychometric Society.

As a result of a suggestion from this Committee, the Social Science Research Council is now sponsoring a small group to work during the summer of 1952. This group will attempt to compile from the literature of the various social sciences lists of problems, extracts from courses, and references to sources that illustrate varieties of uses of mathematics in the social sciences. These compilations are expected to serve a number of important ends, e.g., to provide mathematicians with material for use in texts and courses designed for social scientists, to indicate the general dimensions of the mathematical training appropriate for students of the social sciences now and in the future, and to facilitate the study of mathematics by social scientists for whom organized courses are not available.

The Committee believes that the group referred to would find it most helpful if it could start with a wide variety of suggestions from the various areas concerned. A general appeal for such suggestions is hereby made. They should be sent to Professor William G. Madow, Chairman, Committee on the Mathematical Training of Social Scientists, University of Illinois, Urbana, Illinois as soon as possible.

Although the Committee does not wish to limit the suggestions to specific types of material, it would prefer greater emphasis on materials relating to the use of mathematics in the social sciences themselves than on those relating to statistics, since the materials necessary for statistics are better known. Moreover, the Committee would suggest that those who respond not concern themselves with questions of duplication of what others would say, but give as much information as possible. This first request for assistance is aimed at providing those who are interested in this subject with an opportunity to make their views known to the Committee in as general terms as they wish.

The Committee would also appreciate learning where programs of mathematical training intended for social scientists are now in existence or in process of development, and where mathematics at the level of the calculus or higher is required for undergraduate or graduate degrees in the social sciences or may be substituted for another requirement for a degree in a social science.

World Federation of Mental Health Study Group on Leadership and Authority in Local Communities. At the final session of "special"

study group on Leadership and Authority in Local Communities at the Fourth International Congress in Mexico City, it was agreed that the San Francisco Mental Hygiene Clinic report by Richard Sears, "Leadership Among Patients in Group Therapy," be used as a basis for various local attempts to evaluate and formulate studies. Coordinated conclusions may then be presented at the interim meeting of the World Federation for Mental Health in August 1952 in Brussels. An interim committee was appointed to carry out this work: Dr. Paul J. Reiter (Denmark), chairman; Dr. Donald A. Shaskan (San Francisco), work chairman; Dr. Genevieve M. Stewart (San Francisco), secretary; Dr. Cosa Dell Haskell (San Francisco), bibliographer.

At the meeting of the local study group on January 18, 1952, the following topics of further study were discussed: (a) Economic aspects of leadership, (b) Dynamics of leadership, e.g., how does leadership influence group goals and how do group goals influence leadership? (c) Structural aspects, anthropological conclusions and group tests indicating patterns of leadership in relation to group patterns, group attitudes in relation to leadership, etc., (d) Why and how does leadership emerge?

The Committee is interested in hearing from others who are interested in problems of leadership and authority. Inquiries about the work of the Committee should be addressed to Dr. Donald A. Shaskan, Chief, Mental Hygiene Clinic, Veterans Administration, 49 4th Street, San Francisco, California.

The American Psychopathological Association, which was organized by Morton Prince in 1909 and whose official organ was the *Journal of Abnormal and Social Psychology* during its early period, will honor the memory of the late Samuel W. Hamilton, one of its former presidents, by establishing an annual award in his name to a scientist who has made an outstanding contribution to the field of psychopathology. The scientist may come from any of the fields which contribute to the progress of psychopathology. He will deliver a lecture to be known as the Samuel W. Hamilton Memorial Lecture at the time of the annual meeting of the Association, which will take place this year on June 6 and 7 at the Park Sheraton Hotel, New York. Anyone wishing to make a contribution to this fund may do so by sending his con-

tribution to Dr. William B. Terhune, Chairman, Samuel W. Hamilton Memorial Award Fund, Silver Hill, Valley Road, New Canaan, Connecticut.

The New York Association of Clinical Psychologists in Private Practice has been in the process of organizing for the past year and has recently adopted a constitution and formally elected officers. The Association includes members in New York, New Jersey, and adjacent areas. The main purposes of the Association are to provide for the cooperative associations of persons who are actively engaged in the private practice of clinical psychology and to promote and maintain professional standards among clinical psychologists in private practice. Membership requirements include a doctorate in psychology or in an equivalent subject and a minimum of three years of full-time practice in clinical psychology, at least two years of which have been adequately supervised and at least one year of which has been in the clinical specialty used in private practice. A "grandfather" clause is included for reputable practitioners who may not quite meet the doctoral requirements. The Executive Committee of the Association consists of George Lawton, Harry V. McNeill, Robert D. Weitz, Rose Palm (secretary-treasurer), and Albert Ellis (chairman). Inquiries concerning membership may be sent to Dr. Rose Palm, 263 West End Avenue, New York 23, New York.

Vacancies

One laboratory assistantship and two research assistantships at Connecticut College, New London, Connecticut. New students eligible, female preferred; interest and/or experience in experimental animal, or physiological areas desirable for research openings; familiarity with equipment and tools desirable for laboratory assistant. Stipend, \$1,200-1,600 plus tuition and housing. Write to Dr. M. H. Applezweig, Wesleyan University, Middletown, Connecticut.

Instructorships, three positions available, new PhD's desirable. Salary, \$3,000 for nine months plus \$600 for six weeks summer teaching. Begin in September 1952. Also, assistant professorship, PhD with teaching experience. Salary, \$3,800 plus \$750 for summer teaching. Apply to Dr. Granville C. Fisher, Department of Psychology, University of Miami, Coral Gables 46, Florida.

Convention Calendar

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For information write to:

Dr. Fillmore H. Sanford
1515 Massachusetts Avenue N.W.
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August 25-30, 1952; Brussels, Belgium

For information write to:

Mrs. Grace E. O'Neill
Division of World Affairs
National Association of Mental Health
1790 Broadway
New York 19, New York

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RECOMMENDED STANDARDS FOR TRAINING COUNSELING PSYCHOLOGISTS AT THE DOCTORATE LEVEL

COMMITTEE ON COUNSELOR TRAINING, DIVISION OF COUNSELING AND GUIDANCE
AMERICAN PSYCHOLOGICAL ASSOCIATION

IN the light of the increasing demand for professional psychological services, there is need for a clear statement of the training that should be given to various types of psychological practitioners. This report will provide an explicit statement of the standards for training counseling psychologists.

Because of the growing concern with the problem of the mental health of our nation, and with the effective use of the nation's human resources, counseling psychologists have been spurred to re-examine their functions as they relate to society. This means a concern for the training programs which contribute to the fullest development of these functions. Following two previous conferences (2, 3), the Counselor Training Committee of the Division of Counseling and Guidance, through the effective work of a subcommittee in PhD training, and with the concurrence of the Division's 1950-51 Executive Committee, presented a formal statement on doctoral level training to an invited group of the Division's membership in Chicago, August 29-30, 1951. The accompanying proposal of training standards is the outgrowth of the work of this conference and of the Division's Committee. It has been reviewed and approved by the 1951-52 Executive Committee of the Division and, by action of the membership at the 1951 annual business meeting, thus becomes an official statement of the Division.¹

This statement should be of interest not only to counseling psychologists but to psychologists generally since it clarifies training standards in one field of psychology. It should serve as an aid to university departments engaged in training counseling psychologists. This report should enable foundations, governmental agencies, and other relevant social institutions which support training for this type

of psychological practice to become more discriminating in their support. Society at large should, through this statement, become more aware of the attempts being made to develop needed psychological services at adequate levels of competence.

ROLE AND FUNCTIONS OF COUNSELING PSYCHOLOGISTS

The professional goal of the counseling psychologist is to foster the psychological development of the individual. This includes all people on the adjustment continuum from those who function at tolerable levels of adequacy to those suffering from more severe psychological disturbances. The counseling psychologist will spend the bulk of his time with individuals within the normal range, but his training should qualify him to work in some degree with individuals at any level of psychological adjustment. Counseling stresses the positive and preventative. It focuses upon the stimulation of personal development in order to maximize personal and social effectiveness and to forestall psychologically crippling disabilities. This facilitation of personal growth takes place through utilizing the interrelated techniques of psychological assessment and effective intercommunication between client and counselor. It means also the utilization of the interpersonal relationships involved in group situations as well as in individual counseling.

With the stress on facilitating optimal personal development, it is understandable that educational institutions provide a central setting in which counseling is carried on. Considering the relative plasticity of children and adolescents and the social responsibility of schools and colleges for this age group, it is both historically and socially fitting that educational facilities remain the most important institutional home for psychological counseling functions. Other settings in which counseling psychologists function are business and industry, hospitals,

¹The memberships of the two-day Conference and of the Executive and Counselor Training Committees of the Division are given at the close of this report.

and community agencies such as churches, youth organizations, marital clinics, parenthood foundations, vocational guidance centers, and rehabilitation agencies. The training program should qualify the counseling psychologist to work effectively in such varied settings.

Closely related to this matter of setting is the fact that doctorally trained counseling psychologists often carry administrative, supervisory, training, research, and public relations responsibilities. Thus, the counseling psychologist must be able to supervise the testing and counseling activities of the less intensively trained staff, to make diagnostic decisions regarding cases requiring collaboration with other specialists, and to interpret counseling functions to higher levels of administration, to other professional workers, and to the public at large. He needs to be skillful in working out effective organizational relationships and a favorable work climate within the total institutional setting. He must provide the leadership that encourages high productivity and morale among staff members. The counseling psychologist must also provide training for others both through supervision and formal teaching. There is a marked current need for counseling psychologists with sufficient breadth and experience to assume training roles in colleges and universities.

The activities of counseling psychologists and the types of clients and problems with which they deal place an emphasis on collaboration with people in many professional settings. These include teachers and educational administrators, physicians and psychiatrists, social case workers, group workers, other psychologists, community officials and administrators of social agencies, executives and other personnel in commerce and industry.

Finally, it must be emphasized that on counseling psychologists falls the chief responsibility for conducting the research upon which depends the possibility of more effective counseling. Any applied field needs roots in the basic scientific discipline which lends substance to its work. It is therefore imperative that psychological counseling remain firmly established within the orbit of basic psychological science and the related disciplines, and that counseling psychologists acquire the research skills which make possible the enlargement of knowledge. We feel strongly that research must continue as a basic job of the counseling psychologist and that he must be trained accordingly.

SELECTION OF STUDENTS

In selection, we can state our goals with clarity and, at the same time, recognize the crudity of the selection methods now at our disposal. Our goal is the selection of students who are intellectually able, professionally motivated, emotionally and socially mature, and curious about the unknowns in the field of psychology. Limited training time and resources, as well as the welfare of prospective students, make it highly desirable to utilize effective selection procedures.

We are aware that despite the importance of intellectual ability, professional motivation, maturity, and interest in extending psychological knowledge, the characteristics are insufficient predictors of performance in counseling psychology. They do not completely describe the dimensions of effective counseling psychologists and do not differentiate between counseling psychologists and other specialists within psychology. In the light of the importance to the prospective student, to the training institution, and to society of adequate selection procedures, it is important that research be done on the distinguishing attributes of those persons who complete their training programs and work effectively as counseling psychologists. This is necessary not only to enable universities to admit appropriate students but also to permit the student to evaluate himself against the demands of the profession and to choose his career with a greater degree of knowledge and security.

The selection methods to which we can give the greatest weight involve the use of such familiar approaches as the academic records of the applicant, tests of intellectual status and attainment, personality tests, interviews, and evaluation of work experience. In this last connection attention should be given to evidence of successful work with people in job situations as well as in volunteer capacities. Without more research evidence concerning what is meant by both "effective" and "counseling," in trying to select those who will become effective counselors, we must admit extensive margins of error with these or any other methods.

Selection is in many ways a continuous process. The student meets critical evaluation points not only at the time of his entrance into the department but also at the point of course and matriculation examinations, practicum evaluation, and indeed in his daily work. This calls for a system of selection

and evaluation which will periodically require the assessment of a student's status so that progressive advancement or elimination can take place without waste of time and resources. Because self-understanding is requisite to intelligent motivation and performance, selection should be a reciprocal process between student and staff. The student as well as the institution has a voice in the selection process. It is clear that this process has definite counseling implications.

The prospective counselor's undergraduate program should represent a balance among the physical, biological, and social sciences, mathematics, and the humanities. Too often prospective counselors are permitted to elect specialized technique courses in the undergraduate phases of their training. The student should have an adequate background in the field of psychology, but these introductory courses should be of a broad nature. They should introduce him to the theoretical and factual foundation of psychological thought, and they should give him an overview of, but not training in, psychological practice.

GRADUATE TRAINING

The counseling psychologist should be given opportunity to acquire a core of basic concepts, tools, and techniques which should be common to all psychologists. The title of the sponsoring department is not as vital as the training and experience of the faculty members who offer the training. Too often faculties sponsoring counselor training programs consist of persons whose own training is not primarily psychological and whose experience in counseling is limited. Such a staff cannot provide adequate facilities for training counselors at the doctoral level. Training in counseling psychology will be greatly facilitated by interdepartmental cooperation and collaboration and by giving primary attention to the content and quality of instruction without regard for departmental labels.

Breadth of Training vs. Specialization

The counseling psychologist assists clients who have many types of problems, for example, emotional, vocational, marital, language, and study methods. Counseling agencies differ in the manner in which they handle this wide range of problems: some have general counselors who handle all types

of problems, others refer clients to counselors specializing in particular areas. The counseling psychologist should have had some experience in all of these areas, in order to handle such problems or in order to work effectively with other counselors. It is recognized, on the other hand, that individuals in training and even training institutions may wish to give particular emphasis to certain of these problem areas in their training programs. The opportunity for training institutions to try out new areas and emphases is one important means of furthering the most effective evolution of the counseling process. While the training program should insure a broad knowledge of both psychology generally and of the various counseling specialties, it should not be too rigidly prescribed. Opportunity needs to be given for individual specialization and institutional experimentation.

An effective doctoral training program can be postulated only if one assumes that training is a process continuing throughout the counselor's professional career, and that the predoctoral program provides a base for the more specialized training that must follow. A counselor begins training in specialized areas of counseling, in line with his interests and aptitudes, during his graduate study, but in the main his graduate work in counseling is of a general rather than a specialized nature. At the completion of the doctorate a counselor's training is far from complete and thus the expansion of postdoctoral training becomes increasingly important.

This inevitable incompleteness of the doctoral training program has other implications. One is that the training program which attempts to turn out individuals capable of being all things to all people is doomed to failure. The emphasis on breadth, while important, must be kept within limits consonant with the student's ability to gain competence in various areas of counseling practice. Beyond this it seems likely that the persons most likely to function usefully will be those who best know their professional and personal strengths and weaknesses. It will be these who are motivated to capitalize on further training opportunities. Each department should therefore give explicit attention to the student's personal development throughout his training period. This should not only help him to live with himself in full knowledge of his limitations and with a genuine and reasonable desire to

overcome them, but it should also facilitate optimal learning during the doctoral training period.

The doctoral program itself should include, in addition to the common core mentioned in the first sentence of this section, the areas described below. Instructions in each of these areas may be given in courses, seminars, and practice.

1. *Personality organization and development.* This is an area of central importance to the counseling psychologist. Included in this area would be opportunities for review of academic theories of personality as well as those implicit in current concepts and practices of counseling and psychotherapy. It should also include opportunities for analysis of developmental patterns of behavior from a longitudinal as well as a cross-sectional point of view. Emphasis should be placed on the variability of developmental patterns rather than on the frequency of discrete items of behavior. This area should also include analysis of the psychological characteristics of deviant individuals including abnormal personalities, intellectual deviates, and social deviates. Special attention should also be given to the social and cultural determinants of personality as well as to social learning and communication as factors in the development of personality.

2. *Knowledge of social environment.* In addition to knowing how individuals learn to interact within social groups it is assumed that the counseling psychologist must have a knowledge of a great many aspects of our social structure. He should be familiar with the broad problems of social structure and organization, with cultural conditions, and with the heterogeneity of subgroup patterns within our culture. On a more specific level he should be acquainted with community resources for meeting educational, employment, health, social, and marital needs, and with socioeconomic and occupational trends.

3. *Appraisal of the individual.* The student should acquire extensive knowledge of and skill in using various types of psychological tests. This includes basic training in test theory, in the use and interpretation of both objective and projective techniques, and in the use of such informal methods of group and individual appraisal as interviews, autobiographies, questionnaires, and rating scales. The counseling psychologist's diagnostic competence should be sufficient to enable him to make diagnoses

in his own field and to recognize the need for diagnostic referrals to other specialists.

4. *Counseling.* The program should involve a comprehensive review of the major theories of counseling and psychotherapy. The student should gain extensive familiarity with basic ideas and techniques involved in individual counseling and therapeutic work. He should also be introduced to such procedures as bibliotherapy, group therapy, group discussion techniques with a variety of kinds of groups, and utilization of student activity programs and mental hygiene lectures. An awareness should be developed of the advantages and limitations of these various individual and group methods.

One way by which the student may gain an enlarged basis for understanding the counseling process is by having been on the receiving end of a counseling experience. Despite this value for training, such an experience has greatest value when it comes about as a result of the student's own motivation. This report does not therefore suggest that a didactic counseling experience be required. Many students may themselves need counseling, however, in order to achieve or maintain adequate personal maturity. It is the responsibility of the training department to do everything feasible to understand and meet such a need.

5. *Professional orientation.* An important aspect of the training of the counseling psychologist is the development of sensitivity to the counselor's responsibilities in social and interprofessional relationships. In addition, there are the many ethical considerations involved in practice, as well as the problems posed by the necessity for maintaining a balance between loyalties to clients, to the institution, and to society. Still another desideratum is the development of awareness of the various administrative patterns characteristic of the several types of social agencies within which the counseling process takes place. For example, a counseling psychologist working on a college campus needs to understand the administrative structure of higher education.

How this goal is to be implemented is deliberately left an open question in this report. Training agencies will and should differ in the ways which they will find most appropriate to meet this vital part of counselor preparation. Some will prefer to cultivate the relevant attitudes and knowledges

through courses offered late in the doctoral sequence. Others will choose to do the job through seminars and informal discussions during the internship period. Still others may find it most feasible to handle professional orientation through the supervisory or student-adviser relationships. It is important for all training experiences to be permeated with proper regard for problems of a professional nature. But this casual and indirect approach to the required knowledges and attitudes does not seem sufficient. Specific attention must be given to the adequate orientation of the student to the profession of psychological counseling in its various contexts.

6. *Practicum.* The objective of the practicum is to provide the counseling psychologist with a sense of the realities of the counselor-client relationship and of various staff relationships. It provides him with opportunities to apply his academic knowledge to practical problems of personal adjustment and to integrate the various skills required for understanding and helping a person. Competence in counseling is its goal.

The type and amount of practicum experience needed by a given student depend on the types and amounts of experience which the student has already had. In most cases, the counseling psychologist will need to develop practical competence by means of a planned sequence of supervised laboratory courses, field work, and an internship. In cases where the department and the student decide that certain competencies have already been acquired by the student, the practicum phase of training can be shortened accordingly.

The proposed sequence of practicum work consists of prepracticum or laboratory work related to academic courses, followed by field work for one or two days per week for a semester or a year, followed (in the third or fourth year) by a half-time internship for two years or a full-time internship for one academic year. Patterns of practice will vary according to the student's attained competence, his objectives, and the available resources. Most of the didactic background specific to that part of the counseling process should be acquired before entering a given stage of the practicum. It is important that adequate supervision be provided by both the university and the practicum agency so that the experience may be truly progressive and instructional.

The nature of this supervision, provided either by the university or the practicum agency, is a critical

factor in the training program. In addition to safeguarding the interests of clients, adequate supervision is necessary to provide a truly progressive instructional experience. A sensitive, permissive supervisor, who is himself a mature counselor, can be one of the most important influences on the student's ability to understand and evaluate his motivation to counsel and to adjust his motivation to the best interests of his clients. There is great need, however, for research on the supervisory process itself. We know too little about how to provide supervision so that the student gains measurably both in counseling skills and in the supervisory techniques which he will use later in his own career.

The counseling psychologist should be exposed to as wide a range of counseling situations as possible, but the major emphasis should be upon work with normal individuals and upon the attainment of competence in basic skills. The practicum should provide some experience with the emotionally maladjusted and with physically and socially handicapped clients. This latter experience should be in collaboration with other specialists such as physicians, psychiatrists, social case workers, and teachers.

Elaboration of these points will be found in the separate report of the Subcommittee on Practicum Training (6).

7. *Research.* Training for research should include provision for actual research experiences. Most training institutions have arranged for students to carry out minor research studies in addition to the major research project represented by the doctoral thesis. Although training in research is considered essential for all counseling psychologists, allowance must be made for the range of research abilities that will be found among students, no matter how carefully selected. It can be expected that counseling psychologists will range from those who will make minimal research contributions to those whose major professional contribution will fall in this sphere.

At a minimum, such training should aim to develop the ability to review and to make use of the results of research. Psychological counseling is and should be founded upon basic psychological science and related disciplines. The counseling psychologist can make unique contributions to psychological knowledge because his counseling experience provides an especially fruitful opportunity to formulate

hypotheses. It is therefore essential to maximize his research training. How to achieve a balance between practice and research during the training period is an unsolved problem. A flexible program of training in research which takes into account the range of research potentialities of its students will go a long way, however, toward solving this problem.

TENTATIVE TIME ALLOTMENTS TO AREAS OF TRAINING

The recommendations which follow are intended to provide a basis for the more uniform interpretation of the foregoing proposals. They are meant as guides for individual variations in programs, not as rigid specifications. The suggested ranges of time allotments provide for the proposed four-year program including one year of internship. Percentages represent proportions of a year of full-time study. It should be noted that these are not estimates of credit hours, but rather relative weights recommended for the various areas of training.

Proportions of One Year's Study in the Various Areas of Training (Total of 4 years = 400)

Core	65-70	Diversification	30-50
Personality	20-30	Professional orientation	10-20
Social environment	15-20	Practica: Field work and internship	120-135
Appraisal	35-45	Research	45-50
Counseling	20-30		

Although only 70 per cent of a year's work has been allotted to training in basic psychological science, the actual allotment exceeds the equivalent of one year because the personality and appraisal areas ordinarily include basic courses such as personality theory, theory of measurement, and social psychology.

The relatively small allotment of time to the counseling area concerns only didactic work. It should be kept in mind that much of the practicum will be devoted to counseling experiences.

The recommendation for professional orientation deserves special mention. This aspect of training should permeate the entire program—course offerings, practicum experiences, and the relationship between the student and staff, in addition to what amounts to a relatively small amount of specific course and seminar offerings.

The area of diversification represents a pool of time which may be used to broaden the training

experience. This may be done by enlarging the emphasis given to any of the described areas, by including outside didactic or practicum experiences, or by preparing for related teaching or administrative responsibilities. This permits institutions to modify emphases in their programs in the light of their particular conceptions and to meet individual student needs.

FURTHER STEPS

Following a quarter of a century of training counseling psychologists, this report represents an initial step in formulating standards in the light of new and greatly increased demands for psychological services. Obligations to society and responsibility to the profession require the extension of the work begun here. One primary need in this connection is for training institutions to experiment with their programs. This should be done with an eye toward developing an explicit empirical base for the revision of standards and for the progressive improvement of the training experiences. Further study should also be made of such matters as post-doctoral training and relationships to other specialties (1).

In this latter connection the training program for counseling psychologists overlaps with training for other psychological fields. The delineation of similarities and differences in either practice or training is not, however, an appropriate problem for unilateral action by representatives of one area. This collaborative effort lies in the future.

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THE PRACTICUM TRAINING OF COUNSELING PSYCHOLOGISTS¹

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NEEDS FOR AND OBJECTIVES OF PRACTICUM TRAINING IN COUNSELING²

Need for Practicum Training in Counseling

The practicum is in some respects the most important phase of the whole process of training in counseling. Without this, the student may be unable to apply his academic knowledge or to integrate required skills to understand and help his clients. The discipline of the supervised practicum in counseling safeguards the public by preparing the neophyte for professional practice. Agencies employing counseling psychologists therefore have an obligation to society and to the profession to participate actively in practicum training programs. Such an obligation should sit lightly, however, since such participation is probably the best way to insure a supply of adequately trained personnel.

The meaning of the practicum experience for the student counselor may vary according to his interpretation of his own needs. Students will commonly find in the practicum an opportunity to synthesize the more or less fragmented phases of their previous academic work and to bring these learnings to a focus upon the actual problems of individual clients. Thus, potential professional knowledge and skill will be centered, not on purely academic ends, but upon the adjustment, orientation, and development of the client himself.

Objectives of the Practicum Training

The essence of the practicum must be the acquisition by the trainee of a sense of the realities of the counselor-client relationship. The trainee's attitude toward this relationship will be of the utmost importance. Thus a highly significant aim of prac-

ticum training will be to bring the trainee into that psychological state where he clearly perceives for himself that his client's personal adjustment and development is his first consideration and loyalty. Of foremost significance also will be mastery of counseling technique by the student-counselor. The preparation of guidance workers has often been too academic in nature. There is no economical way to acquire professional competence except through well-organized and supervised practice. The *practicum program* therefore emerges as one of the keystones of any program for the education of counseling psychologists.

Among other desirable outcomes of the practicum will be the seasoning of the student-counselor in the realities of everyday institutional experience; an acquaintance with working conditions and organizational processes; and an introduction to the problems of maintaining a regular counseling schedule, of building a favorable personal and professional relationship with associates and administrative heads, and of retaining personal mental health under the impact of sustained counseling responsibility.

It is well to recognize that the inevitable restrictions of time and facility impose on most institutions definite limits as to what can actually be accomplished during the practicum period. This means that the practicum training proposed in the literature and announced by training institutions should be realistically in accord with what can be provided. For the rest, responsibility must fall upon the professional personnel supervising the postpracticum experience of the counselor in the early period of his professional practice.

Ethical Considerations

Too frequently, inadequately planned and supervised practice degenerate into clerkships, record-keeping, busywork, or other forms of lower-grade experience inadequate to the essential professional development of the student-counselor. Such experiences may sometimes be rationalized as provid-

¹ One of a series of reports by the Committee on Counselor Training of the Division of Counseling and Guidance of the American Psychological Association.

² In preparing this statement, use was made of that prepared by the APA Committee on Training in Clinical Psychology for that field (*Amer. Psychologist*, 1950, 5, 594-609).

ing necessary seasoning under realistic job conditions, but these should never be recognized as valid forms of practicum training. Responsibility for the activities of the trainee must necessarily be held jointly by the training institution and by the field agency providing the training opportunity. This is true because only the field agency can be on hand for a substantial portion of the time. Nevertheless, the training institution cannot completely relinquish responsibility for its student, but must share the burden with the operating agency at least to the extent of cooperatively planning and evaluating the student's practicum experience. This creates the necessity for a clear initial understanding between institution and agency as to the type of worker required, personal and professional qualifications needed, types of activity to be conducted, extent and methods of supervision to be exercised by both, and other stipulations.

The paramount allegiance of the counselor being to his client, problems sometimes arise among student-counselors as to how they are to act when institutional considerations or administrative restrictions seem to be in conflict with the welfare of the client. Also, the student-counselor may observe practices which he has been taught to regard as wrong or obsolete, and he is in a quandary as to what to do about them. The mature practicing counselor may also encounter such problems, but he has the option of attempting to modify what he regards as faulty practices or of resigning his job. The student-counselor, however, is not yet in a position to pass mature judgment on the professional actions of others or on the policies of institutions, nor is he in a position to withdraw from an uncomfortable situation. Such situations, however, constitute one of the realities of professional living, and it is the responsibility of the training staff of both the university and the practicum agency to provide opportunities for trainees to discuss problems of this sort and to enlarge their understanding of them.

Likewise, the student-counselor may be helped to realize, through adequate handling of situations of this sort, that practice rarely attains the level of theory. He learns that practical situations always impose limitations and that, at the best, a balance is attained in which negative factors are outweighed by the positive.

LEVELS OF PREPRACTICUM AND PRACTICUM TRAINING

Background preparation such as that recommended in the report, "Standards for Training Counseling Psychologists,"³ should provide a basic psychological understanding of (a) prospective clients, especially in terms of their social and cultural relationships, (b) the tools and skills of counseling, and (c) community agencies and their evolving function in the broader social context.

The training center should provide:

a. *Laboratory experiences*, to help the student-counselor master basic tools and basic skills. These normally are provided in the first and second years of study, as a part of academic courses, for which the student pays tuition and laboratory fees.

b. *Field-work experiences*, to help the student-counselor relate his tools and skills to one another, use his tools and skills to understand and meet the needs of clients in the functional setting of an agency, and to learn to see clients as persons. These are usually provided in the second semester of the first year and during the second year of training, the agency providing the experiences as a service to the profession and the student undergoing them as part of his training, without pay.

c. *Internship in an agency* is the terminal phase of his practicum training, in which the student-counselor integrates his skills with a crystallizing philosophy of service to clients, to the agency, and to the community served by the agency (usually in the third or fourth year of study), for pay appropriate to a learner.

The progressive development of the student-counselor from content mastery through the prepracticum and various practicum levels of training can be seen more clearly if briefly outlined in terms of several criteria.

Time in Practica

Time spent in practica will vary with the level. The *prepracticum* or laboratory experience may be viewed as course-related activity which continues for one or two semesters, depending upon the length of the course. It normally requires from three or four hours per week in the prepracticum, course-

³ Committee on Counselor Training, Division of Counseling and Guidance, American Psychological Association. Recommended standards for the training of counseling psychologists at the doctorate level. *Amer. Psychologist*, 1952, 7, 175-181.

related, mastery of skills (learning to administer and score group and individual tests, conducting simple registration or information-getting interviews, etc.). The *field-work* experience usually continues for a semester or a year, depending upon the experience of the student and the number of hours devoted by the student each week; the period should involve a minimum of 100 to 200 hours. Part of the field work may be done in the second semester of the MA program, part subsequently to that. Field work usually requires from one to two days each week. The *internship* calls for half time (20 hours per week) for two years or full time (35 to 45 hours per week) for one academic year devoted to agency activity and related community service.

Levels of Skill

In the *laboratory* or prepracticum level the student-counselor is learning the fundamental tools and skills (testing, interviewing, recording) and may employ the laboratory experience to improve his techniques, learn the limitations of each of his instruments, and to develop beginning understanding of how to assess and influence client behavior, although it is not likely at this stage that he will work with actual clients.

The *field-work* experience affords the student-counselor an opportunity to work more intensively with his tools and skills within an actual agency setting, in carefully graded ways and under close supervision, with selected clients. At first his activity will be limited to assisting, observing, and applying his skills to parts of the total problem presented by a client. As his technical skills develop and his understanding of the agency's function deepens, he may be permitted to carry increasingly greater responsibilities for working with clients. By the close of his field-work experience the student should have mastered basic techniques and be ready to serve actual agency clients reporting relatively simple kinds of problems.

The *internship* takes for granted mastery of the basic skills of counseling psychology and provides the student-counselor with opportunity to carry a variety of cases under supervision, the closeness of the supervision varying with the intern's competence and with the type of case.

PREREQUISITE EDUCATION

Since the practicum experience is seen as a continuing program, education prerequisite to it is seen

not as just the academic background preceding the initial field work, but as the development of a series of skills, understandings, and knowledges coordinated with and directed toward increased responsibilities and ever widening experience with actual clients.

1. Education prerequisite to initial field work.

a. The basic core recommended by the APA (*Amer. Psychologist*, 1947, 2, 539-558) as background for graduate study in clinical psychology is in general considered desirable background for counseling psychologists. It has been discussed with particular reference to this field in a companion report.⁴

b. Additional classroom instruction essential to understanding counseling tools, processes, and functions, and to understanding the counselee as a person, is reserved for graduate study. As specified in the statement on doctoral programs the following *areas* (not necessarily specific courses) are important to the field work experience:

Personality organization and development.

Knowledge of social environment: cultural and social factors affecting behavior, sources of information, educational resources, financial aid, health services, employment services.

Appraisal of the individual: principles and techniques of measurement; evaluation of normative data; test analysis and review.

Attendance at case seminars, toward helping the student see aspects of his currently acquired information in the setting of full case material.

Laboratory work in test administration, scoring and reporting of results, and interviewing.

c. The experience of being a counselee is desirable for the student if it can be a bona fide one.

2. Education prerequisite to an interview relationship with a client. The difference between this and the next section is in terms of the degree of responsibility to the client which is assumed by the student. Use of actual case material, preferably from students' field work, helps to keep the client and his problems from being lost to view in the focus of attention on techniques. Directly related to field work is didactic instruction in the following areas:

Counseling theory: philosophy and principles of counseling.

Appraisal of the individual: techniques for studying the individual (including interview, questionnaires, observation,

⁴ See footnote 3.

and tests and inventories); observation and discussion of interviews; synthesis of data from various sources.

Professional orientation: interprofessional relations, ethical practices, loyalties, professional and agency organization.

3. Education prerequisite to carrying, under supervision, major responsibility for a client. Much of the preparation for increased responsibility will be achieved through field work, continuous seminars, case conferences, critical analysis of case records and of recorded or observed interviews, and following the progress of clients with whom the student has had contact during his field work. In addition, material in the following area is important to the student-counselor's effectiveness: Counseling theory: procedures and techniques (including initiation, maintenance, and termination of the counseling relationship, referral, follow-up, and evaluation).

THE NATURE OF THE PRACTICUM EXPERIENCE

The nature of the practicum experience necessarily varies with the amount of training possessed by the student, the functions of the organization in which he works, and the amount of time given by the student to practicum activities. The field worker normally brings less training and devotes less time to his practicum work than does the intern.

Variety of counseling problems. Each community guidance center, school or college counseling service, rehabilitation service, or other agency in which practicum experience may be obtained, necessarily works with a limited variety of clients. They may be adolescents in school or college, young adults about to enter or who have recently entered the world of work, tubercular patients of all ages, older adults, or some other rather specialized groups. The problem raised by these clients may center largely on education, vocational choice or entry, progress in a field of work, value conflicts, family relations, use of leisure time, some phase of personal-social adjustment, or some other area.

It is desirable for the counseling psychologist to have a combination of breadth and depth in his practicum training within the limitations imposed by the availability and nature of suitable practicum training facilities. He should see a variety of students and clients, and should have a first-hand familiarity with problems of educational choice and adjustment, vocational choice and planning, and personal-social adjustment and development. He should develop competence in diagnosis, counseling,

referral, use of resources, and interprofessional relations, and in dealing with problems of ethics. At the same time, the student-counselor should work intensively enough in one or more areas to be able to carry on work of that type with little or no supervision.

Breadth of practicum experience can probably best be attained by a combination of field work placements which enables the student to (a) observe, interview, and test a variety of cases handled by more experienced counselors and (b) participate in case conferences in which varied problems are considered and different procedures and resources are reported and discussed.

Depth can best be gotten by working intensively as an intern with a limited variety of problems in order to develop a deeper understanding of, and more skill in diagnosing and counseling, problems of that type.

Types of institutional settings. What has been said about the variety of counseling material encountered in practicum training has implications for the types of institutional settings in which practice may be provided. No one setting is likely to provide a great variety of experience, but it can provide some variety and considerable depth.

For example, a college student counseling service can normally provide intensive experience with problems of curricular and vocational choice, aspiration and achievement levels, vocational planning, adjustment to family and group living, and value conflicts; it may provide experience in diagnosing and counseling cases of personal adjustment problems of a more deep-seated type, in psychotherapy with the mild neuroses, in working with handicapped persons, in helping with problems of marital adjustment, and in referral for specialized services. While it is not likely to provide the intensive experience in helping persons who are floundering vocationally during their first years of work that another type of community guidance center might, nor the experience in the coordination of community resources for the training and placement of various kinds of handicapped persons that a social agency can, nor much experience in the diagnosis of the psychoses, it can do something in those directions.

A student-counselor's internship is usually best served in an institutional setting comparable to that in which he plans to work, so that he may acquire special familiarity with the peculiar problems of

that type of setting. Thus, if he is likely to work in a college, an internship in a student counseling center would normally be most appropriate. For students with other objectives, internships in public schools, community guidance centers, rehabilitation services, child welfare agencies, family service agencies, or industrial consulting organizations may be more appropriate. While attaining competence in a specialty is desirable, the university, the practicum agency, and the student should never lose sight of the need for versatility. The Committee feels strongly that counseling psychologists, especially those trained to the doctorate, should have command of a wide variety of skills and knowledges, permitting them to adapt to a number of different professional situations.

Knowledge, approaches, appreciations, and skills learned. Field-work students generally need opportunities to use skills and apply knowledge learned on the campus to real clients in life situations, so that they may be able to perform specific services under supervision. What is normally needed at the point of entering *internship* is (a) skill in establishing effective professional relationships, (b) diagnostic, prognostic, and treatment skills (i.e., skill in reaching an understanding of causative factors as contrasted with mere skill in testing or interviewing), (c) self-understanding and self-discipline, (d) understanding of and ability to fit into an actual institutional or agency setting, to work effectively with a variety of professional colleagues, and to deal appropriately with ethical problems, and (e) understanding of the community and societal functions of guidance and of the institution or agencies in which guidance is provided. The internship experience is uniquely suited for the development of these understandings and skills, and should be so planned as to contribute to their development to the highest possible degree. By the time he finishes the internship, the intern should be functioning as a regular junior member of the agency staff.

Methods, types, and quality of supervision. As the practicum student's role in the practicum agency is comparable to that of a closely supervised regular employee of that agency, the supervisory function is primarily that of the practicum agency. While the university in which the field worker or intern is a student may provide some supervision, the training center's contribution is most effectively made via the agency staff member who is responsible for on-

the-job supervision, and in periodic contacts such as those provided by joint seminars and consultations.

The supervision provided by the practicum agency consists of (a) planning the student's practicum work in consultation with the university, in terms of his readiness to assume various types of responsibility or to function in various capacities, and in terms of his needs, (b) keeping the student occupied with a meaningful succession of practicum work, (c) observing and evaluating his functioning, and (d) sharing these evaluations with the student so that he may learn from his experiences and with the university so that it too may maximally contribute to the student's growth.

A competent practicum supervisor is a counseling psychologist who has had substantial graduate training in psychology, followed by a number of years of successful counseling experience. Possession of the Diploma in Counseling and Guidance awarded by the American Board of Examiners in Professional Psychology is a desirable type of evidence of competence, but training and experience alone are not enough; the supervisor should be interested in providing practical training for others, effective in sharing his insights with professional students, and free to devote time and thought to providing and evaluating these experiences. In other words, he must also be a teacher and frequently a counselor to the counselor-in-training.

The lack of a tradition of paid internships and of field agency supervision of practicum work (such as exists in the field of social work) may well make difficult the early achievement of standards such as these. During the transition stage it may sometimes be desirable for the universities to play a more active part in the immediate supervision of practicum students. Joint appointments and shared or dual supervision, especially at the field-work level, may be temporary solutions.

Allocation of time in the practicum. The student's time in practicum training should be so planned as to give him the types of experience he most needs, in amounts sufficient to enable him to learn from the experience.

It is probably easier to put a *field worker* in the testing department of a guidance center and have him administer and score tests for the duration of his field work (with the possible justification that even in that time he will not acquire complete competence in testing) than it is to rotate him through other departments and give him a little experience

in their work. But the field worker's concurrent and subsequent studies are made far more meaningful for him if his practicum experience is broad enough to give him some understanding of the various aspects of his field as seen in practical situations.

The *intern* may spend the bulk of his time in counseling, and that with special types of cases, in order that he may develop the basic skills and understandings of work with individuals. But counseling also includes report writing, case conferences, and consultations. The flow of his work should be so planned that he may spend some time with cases of types other than those in which he has specialized, and some time in reading the cases of other counselors, observing the work of other staff members and other agencies, conducting research, and reading on special problems.

Duration of practicum training. As the *field worker* is primarily a student, giving most of his time to academic work on the university campus and spending one or at most two days each week in the field, it is necessary that the field work experience extend over a sufficiently long period of time for the student to acquire a modicum of proficiency in the use of some techniques and to develop some understanding of the problems encountered by the agency and its clients. Field work should therefore probably be planned on a semester (or quarter) basis, and might well continue for a whole year, the second semester being planned to provide experience of a different type or in a different setting. An alternate plan is for the field worker to spend a month or more between terms in an agency on a full-time basis, thus becoming a more integral part of the institution although not remaining there long enough for it to serve the purposes of an internship.

While *interns* spend all or possibly half of their time in the practicum agency, and are primarily related to that agency rather than to the university in that phase of their training, the principal reason for making the internship virtually a full-time activity is to provide intensity or depth of experience for the intern. Whereas field work may be of only a semester's duration, the internship should normally be planned for at least one academic year. This is necessary if the intern is to have the experience of carrying a regular work load toward the end of his practicum, if he is to work intensively with a large enough variety of clients, and if he is to have

an opportunity to function for a time virtually as a regular staff member in an operating situation.

Evaluation of field workers and interns. Practicum supervisors have unique opportunities to observe and evaluate the student at work with clients and with professional colleagues; they have also unique opportunities for guiding the student in the light of these observations. The student's principal supervisor in the practicum agency should synthesize the observations of all supervisors having contact with him, communicate these evaluations to the student in a way which will contribute to his professional growth or to his leaving the field of guidance in a constructive way, and share them with the training center so that it too may use the information in counseling and evaluating the student. Such evaluations should be made at least at the end of each field-work experience and at least twice each semester during the internship.

Through a systematic and continuing evaluation of student-counselors, combined with cooperative research programs, it should become possible to:

- a. modify and improve criteria for selection of subsequent candidates for the internship,
- b. develop more effective means of improving learning in the field,
- c. improve academic course offerings and pre-practicum experiences as needs become apparent, and
- d. help field agencies improve their practice.

ESTABLISHING AND OPERATING A PRACTICUM TRAINING PROGRAM

Agreement between practicum agency and university. It is important that parties representing both the agency and the university meet informally and discuss the various phases of the practicum training program (purpose of the program, obligations to be assumed by each party, length and level of the program, stipend, hours, methods and type of supervision, etc.). After an agreement has been reached, a written statement should be drawn up for use by both parties. This statement will be helpful in the indoctrination of students assigned by the university to the agency. A complete understanding on the part of the student of the relationship between the agency and the university will help to avoid misunderstandings that might otherwise arise. Furthermore, for each practicum student the university and the practicum agency must

work out an appropriate planned sequence of experiences.

Administrative records. An adequate log of his training experience should be kept by the student so that the quality and extent of his agency work can be evaluated in terms of the general plan and the student's individual plan. Such a log should include the number of clients seen, type of clients (problems presented and treatment called for) and type of techniques (tests, interviews, etc.) used. The student's own evaluation of his experience should also be recorded. The keeping of these records is not to be confused, of course, with the keeping of case records.

The agency should keep such records as may be needed in preparing for the university a detailed evaluation of the work done by the student.

Selection of field workers and interns. The final decision as to whether or not a student will be accepted must, of course, be left to the agency. The university, however, has a responsibility for the initial selection, and it can help in the final selection of students by working with the agency in setting up standards and by studying the effectiveness of the selection procedure used by the agency.

An effective system of communication between the agency and the university must be set up. One way in which this can sometimes be accomplished is to have reciprocal appointments. Other techniques, including preplacement conferences of supervisors to plan field experiences, attendance at staff conferences and seminars, and research by doctoral candidates in the field agencies, need exploration and development.

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GRADUATE RESEARCH IN GUIDANCE AND PERSONNEL WORK DURING A TWO-YEAR PERIOD

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GUIDANCE and personnel work has been one of the very active fields of specialization and research on graduate level since World War II. Froehlich and Spivey of the Office of Education in *Guidance Workers' Preparation*, published in July 1949, list 930 accredited institutions in the United States offering at least one course in guidance, and of those 154 colleges and universities which provide a curriculum in counselor preparation leading to a master's degree or to the doctorate. As a part of the requirement for these degrees, the candidates are expected generally, to submit a dissertation for the doctorate, and, in most institutions, a thesis or project for the master's degree.

The present study was undertaken to find the extent and content of graduate research completed in connection with these degree requirements, and also to see how many of these studies are published and through what channels. The study was limited to a two-year period, namely, from July 1, 1948 to June 30, 1950.

A letter was sent to the directors of graduate studies of 154 institutions which, according to the Froehlich and Spivey survey (2), offered graduate programs in guidance and personnel work leading to the master's degree or to the doctorate. With two follow-ups, the returns reached 87 per cent of the institutions contacted. Of the 154 institutions surveyed, 93 sent the information requested, 41 schools indicated that they had nothing to report, and 20 schools failed to respond or to send any information.

On the basis of information received, there were 1,281 separate pieces of graduate research completed in the two-year period. Of these, 429 or one-third were doctoral dissertations and 852 or two-thirds, masters' theses or projects. It will be of interest to note that only 74 or 6 per cent of these pieces of research were published—2 in print,

71 in microfilm, and 1 in microcard. All but one of the published studies were doctoral dissertations.

The content of the 1,281 research studies was extensive. In order to classify it, use was made of the major areas of counselor training recommended by the NVGA publication called *Counselor Preparation* (1). Three areas, "Supervised Experience in Counseling," "Placement," and "Methods of Research and Evaluation," were eliminated from the list since there were no studies in these areas. In lieu of these, three new classifications were added, namely, "Personnel practices—business and industry," "Personnel practices—civil and institutional," and "Juvenile delinquency," to take care of research studies reported. All studies were thus classified under 12 major headings. When the number of entries warranted it, subclassifications were made under the major headings. The final classification with the frequencies of studies occurring in each category are reproduced in Table 1.

DISCUSSION

It is apparent that a substantial number of research studies in guidance and personnel work are annually completed in various colleges and universities. A good part of the research effort of counseling psychologists and others related to the counselor preparation programs in these institutions is invested in these studies as assistance given to their graduate students. It is difficult to assess the quality of these studies, but it is fair to assume that most, if not all of them, add in one way or another to our knowledge in the field of guidance. Textbook writers or other researchers could use these studies very profitably, if they knew of their existence and availability.

At the present time practically all of the masters' theses and projects remain on the shelves of the mother institution and are lost to the profession. Some but not all of the doctoral dissertations are eventually published in one form or an-

TABLE 1

Theses, projects and dissertations in guidance and personnel work
(Completed during July 1, 1948 to June 30, 1950)

Ordinal Number	Topic	Total	Doctor's	Master's	Published			Unpublished
					Print	Microfilm	Microcard	
1	Philosophy and Principles of Guidance	11	3	8	—	1	—	10
2	Growth and Development of the Individual—general	50	23	27	1	4	—	45
2-A	Attitudes	29	8	21	—	1	—	28
2-B	Personality Adjustment	63	29	34	—	5	—	58
2-C	Social and Cultural Factors Affecting Behavior	54	21	33	—	4	—	50
3	The Study of the Individual—general	21	3	18	—	—	—	21
3-A	Tests and Measurements	135	55	80	—	9	1	125
3-B	Interests and Interest Inventories	48	21	27	—	6	—	42
3-C	Projective Techniques	42	28	14	1	6	—	35
3-D	Sociometric Techniques	14	8	6	—	2	—	12
3-E	Reading and Speech Deficiencies and Remedial Practices	41	11	30	—	1	—	40
3-F	Factors Related to Academic Achievement	103	38	65	—	8	—	95
3-G	Prediction of Academic Success	55	15	40	—	3	—	52
4	Collecting, Evaluating, and Using Occupational, Educational and Related Information	106	39	67	—	4	—	102
5	Administrative and Community Relationships							
5-A	Administrative Problems and Relationships	50	10	40	—	2	—	48
5-B	Organization of Guidance Services in Schools	90	22	68	—	1	—	89
5-C	Colleges	37	12	25	—	—	—	37
5-D	Community and Social Agencies	40	6	34	—	1	—	39
5-E	Community Relationships	8	1	7	—	—	—	8
5-F	Techniques Used in Counseling	41	18	23	—	3	—	38
6	Duties, Qualifications and Training of Counselors	22	10	12	—	1	—	21
7	Group Methods in Guidance	23	2	21	—	—	—	23
8	Follow-up Techniques and Uses	69	14	55	—	2	—	67
9	Personnel Practices—Business and Industry	82	21	61	—	3	—	79
10	Personnel Practices—Civil and Institutional	17	2	15	—	1	—	16
11	Juvenile Delinquency	30	9	21	—	3	—	27
12	Total	1281	429	852	2	71	1	1207

other and assumedly after considerable time-lag. One wonders if there are ways of making more profitable use of the work done, and thereby facilitating and enhancing our advance in research in this field. To that end the following suggestions are made:

1. Division 17 of the APA and the Personnel and Guidance Association in cooperation with the Oc-

cupational Information and Guidance Service of the Office of Education of the Federal Security Agency collect and publish annually a list (preferably annotated) of graduate research in guidance and personnel work. The research studies could be listed under inclusive headings and published on loose-leaf sheets to be distributed to and collated by subscribing libraries, agencies, or individuals.

2. Plans be made by appropriate organizations either to enlarge and make more frequent the publication of existing journals in the field of guidance and personnel work or to start a new publication in which at least the more valuable of current graduate research may be published.

It is also apparent that the coverage of the graduate research reported is very extensive. Question arises if some planfulness or consolidation of these research efforts might be more conducive to a more determined advance in the field of guidance and personnel work. Three suggestions are advanced for consideration.

1. The annual publication of completed research studies as suggested above will perhaps eliminate some unnecessary duplication. It is not here recommended that no studies be duplicated when need is felt for verification, or extension, or modification. The recommendation is rather for an economy of effort. When sufficient answers are available in certain problem areas, we should be able to press in certain new directions where our effort will count.

2. It may perhaps be possible for certain organizations like the Committee on Research of Division 17 or a corresponding body of PGA to review the field and publish periodically—once in two or three years—areas of research where research is needed. Such a statement may help the graduate departments to press along certain lines of research of greater immediacy or importance. Nothing said here is meant to curtail the freedom

for research for the individual faculty member or student. Each researcher is free to follow his own particular interests. Nevertheless, those of us who are in charge of training programs, know from experience that the student-candidates for graduate degrees do a good bit of looking around for topics for research. If they know of areas and problems of study waiting to be investigated, they will find it easier to select topics for research, and the results of such studies, when carefully supervised, will not lose anything of merit.

3. It is also suggested that graduate departments develop 3- or 4- or 5-year plans for research. By selecting a particular area or areas of research, a breakdown can be made whereby a number of single or joint studies can, after a period of time, round out the picture in a particular area, thus constituting a solid advance and consolidation of ground won rather than a series of reconnaissance raids without appreciable victory.

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Manuscript received November 5, 1951

No Comment Necessary!

Periodically in the *Literary Gazette*, the publication most widely read by writers and the general intelligentsia of the Soviet Union, there appears a photographic reproduction of items from the American press with accompanying Russian translation and the stock title, *Kommentarii Izlishni* (*Comments Unnecessary*). The intent is to give the Soviet reader a chance to see how America damns itself.

In a fairly recent issue of this publication (*Literaturnâi Gazeta*, 1951, No. 106, p. 2) an article by Georgii Gulia was published which unwittingly turns tables and allows the American, and in particular the American psychologist, to say likewise, "No comment necessary!" Hence, the title. The translation from the Russian follows.

SCIENTIFIC PROFITEERS IN AMERICAN JOURNALS

Mark Twain in his tale, "My Publishers,"¹ offered a clear and vivid characterization of the habits and morals of American publishers which remains applicable to this day. All these gentlemen were first-rate scoundrels. Since they did not exhibit in the least the appearance of cunning old foxes, it was all the harder to discern them for what they really were. Their manner and countenances, on the contrary, radiated piety. In the very act of preparing to play some author for a fool, they would precede their business with a prayer. The writer, on wising up to them, would then grow concerned only with the deliverance of "his reputation unstained from these filthy dealers."

It has been many decades since the time of this story, but even now the American reactionary press continues to deceive honorable people, to involve them unwittingly in its dirty business, and to profiteer by the use of their names.

As an example of contemporary skulduggery, several so-called scientific journals, such as *Psychological Abstracts*, *Journal of Social Psychology*, and *Journal of Genetic Psychology*, may be cited. In a moment we shall explain in greater detail what the matter's about.

Once upon a time, if you please, the journals named above certainly had the right to be called scientific, if one overlooked the usual shortcomings inherent in bourgeois science and in its press organs. We underscore: *had* the right.

If American journals or foreign journals, in general, should serve the aims of science, peace, and progress, Soviet scientists would eagerly cooperate with them. Soviet scientists have not hesitated to take active part in various inter-

national scientific congresses and conferences or to submit articles on their research to foreign scientific publications.

Until not too long ago a number of Soviet scientists did, in fact, cooperate with several American psychological journals. Thus, Professor V. P. Osipov, a prominent psychologist, a pupil of Bekhterev, and a corresponding member of the USSR Academy of Sciences, was on the editorial board of the journal, *Psychological Abstracts*. Prof. K. N. Kornilov, member of the Academy of Pedagogical Sciences, was on the editorial board of the *Journal of Social Psychology*, and Prof. A. R. Luriiâ, member of the Academy of Pedagogical Sciences, on that of the *Journal of Genetic Psychology*.

Such was the situation to the very end of the second world war. But now the war was over. American imperialism had enriched itself beyond bounds on the blood of others. It had appropriated to itself the venal governments of the capitalist countries and now aspires to world domination. The preparation, initiated by American reactionary circles, toward a new war, the armament race, and the growth of rapacious appetites have led to serious changes in the whole life of the American people. Police measures, directed toward the suffocation of every freedom, an unlimited thought control, war hysteria, and the general decline of scientific thought have also had a very strong effect on the content of scientific journals.

It was no accident that with the end of the second world war the tone and trend of the journals *Psychological Abstracts*, *Journal of Social Psychology*, and *Journal of Genetic Psychology* should have changed. The number of antiscientific articles in them mounted sharply. The general character of the journals became insufferable to every serious scientist. As an instance, for what does *Psychological Abstracts* declaim and contend, and what does it print? The journal pretends to detailed information on psychological literature, published all over the world. Behind this pretension and claimed for "scientific objectivity," which are only screens, lies hidden a reactionary, antiscientific, and antipopular [anti-people] propaganda. Various reactionary theorists without any connection with real science sneak onto the pages of this journal. In the narrow confines of a gazette article it is difficult to relate all the pseudoscientific devilry which the journal dishes out to its readers. We shall cite only a few examples.

A great number of the summaries in this journal are devoted to the exposition of psychoanalytic psychology and to propaganda in its behalf. The idea is insinuated that the root, so to say, of all social ills lies in unconscious complexes, in psychic traumata suffered in childhood, and so forth. This so-called science explains, let us say, the merciless exploitation of the workers, the advent of fascist regimes, colonial brigandage, race discrimination, and aggressive wars, as begotten by [guess what!] ² a person's sexual urge.

² The bracketed expressions here and shortly following are an attempt to reproduce the force of the dash employed in the original.

¹ A diligent search of the complete works of Mark Twain failed to turn up this tale. This and the reputed quote at the paragraph's end are evidently fabrications pure and simple. Prof. H. M. Jones, an authority on Mark Twain at Harvard, corroborates the suspicion.

A special section of this journal, pseudoscientifically entitled, "Parapsychology," is set aside for the summarizing of books and articles, devoted to [guess again!] communication with souls of the deceased, mental influence on people at a distance, and like rubbish.

Under the guise of a report on "Scientific Investigations,"⁸ the journal prints detailed reviews of books of [believe it or not!] spiritualists and astrologists.

The *Journal of Social Psychology* and the *Journal of Genetic Psychology* do not lag behind *Psychological Abstracts*. The latter of the first two, for example, busies itself with demonstrations that "people who belong to the lower classes exhibit a lower intellectual level than people of the middle and higher classes" (article by Phillips in the Sept., 1950 issue of the journal).⁴ And in the article by Butterworth and Thomson (March, 1951 issue of the journal) there is presented a justification of enthusiasm for detective stories, notorious for their cultivation of cruelty and licentiousness, on the alleged basis that these books reflect the marks of "a masculine attitude toward life."⁵

It may be asked: To whom is all this necessary? To science? No! To the scientific lackeys of imperialism? Yes!

The question now very rightfully arises: Can Soviet scientists, who are the servants of progressive science, participate in similar "scientific" journals whose function it is to propagandize obscurantism and every kind of devilry? Of course, they cannot.

That is why, even in 1946, Prof. V. P. Osipov severed every relation with the journal *Psychological Abstracts* and submitted a written request for the removal of his name from the pages of this journal. The directors of the jour-

⁸ This does not correspond to headings employed by *Psychological Abstracts*.

⁴ This is a standard prop of Soviet propaganda and is a faked quotation. The nearest that one may come to the ostensible quote reads as follows: "The results show, among other things, that the lower social class members [in junior high school] score reliably lower on intelligence and personality tests than do middle and upper class members." (Phillips, E. L. Intellectual and personality factors associated with social class attitudes among junior high school children. *J. genet. Psychol.*, 1950, 77, 61-72; p. 71.)

⁵ This again is out and out misrepresentation and fakery. It is lifted almost verbatim from the Soviet's recent campaign against detective stories for which Soviet literature harbors no place. The closest to the reputed paraphrase and quote runs as follows: "The relationship between popularity of [comic] books and their characteristics indicated that, in general, boys tended to select magazines whose contents were such as to appeal to predominantly masculine interests and which were written from a distinctly masculine viewpoint; whose stories featured the elements of adventure, violence, and success for the hero; whose main theme was sports; and whose chief appeal was humor." (Butterworth, R. F., & Thompson, G. G. Factors related to age-grade trends and sex differences in children's preferences for comic books. *J. genet. Psychol.*, 1951, 78, 71-96; p. 95.) Surely, at the very least, the Russians know the difference between a detective story and *komiks*.

nal put on a deaf-and-dumb act. No answer to this request ensued, and the name of this prominent Soviet scientist continued to appear on the pages of the journal. In 1947 Prof. Osipov died. The editorial office of the journal was twice notified about this. And what happened? Would you think that they would remove the name of the deceased professor from the pages of their journal? Well, it just didn't happen. The name of Prof. Osipov, it turns out, is too indispensable for the maintenance of the journal's authoritativeness. The journal *Psychological Abstracts* in spite of frequent reminders blithely continues to list the name of Prof. Osipov as a member of its editorial board.⁶

Prof. K. N. Kornilov sent an analogous request that his resignation from the editorial board of the *Journal of Social Psychology* be noted and acted upon. Prof. A. R. Lurija did likewise as regards the *Journal of Genetic Psychology*. And what happened? [Nothing!] These journals continue to print the names of these Soviet scientists as members of their editorial boards.⁷ Why, it may be asked? Again in order to maintain the authoritativeness of anti-scientific American journals.

Soviet scientists categorically decline to assume any responsibility for the reactionary antiscientific propaganda of journals of the type that *Psychological Abstracts*, *Journal of Social Psychology*, and *Journal of Genetic Psychology* represent. However, the editorial offices of these journals have decided to profiteer by the continued unauthorized use of their names. On the covers of their publications they persist in recording the names of people whom it is profitable for them to cite as being on their editorial boards. Lists of these people are set up with three considerations ostensibly in mind. First, the geographical. It is necessary that the distribution of editors be world-wide, for by this they hope to have demonstrated the "world-wide" character of their publications. Second, the names of the editors have to sound an authoritative ring in the ear, for in this manner one may conceal whatever nonsense the journal may choose to print. Third—and this is the most important—the editors must be representative, as far as possible, of the most varied directions of scientific thought. Then, in reply to any accusation of bias, reactionary character, or obscurantism, these journals

⁶ Dr. Louttit writes: "Interestingly enough Doctor Osipov has bothered me for some time. I never received any word about his death, and in fact a couple of years ago I wrote him, but never had any kind of an acknowledgment. However, he is not the only deceased psychologist whose name has been carried. The list of names on the title page has been meaningless for the last five years and this year [1951] we had decided to eliminate them beginning in January [1952]. Now I suppose the Russians will take this as evidence that their article had a specific effect" (personal communication).

⁷ Dr. Murchison remarks à propos this that, since he is "the only editor who dates back to the 20's when these contacts began, [he] could write some quite interesting history" (personal communication). To quote Dr. Louttit again, there certainly has been a "careless use of facts," to put it charitably.

may invoke the name of an editor who is identified with honorable science.

Business men well understand the profit which mere mention of the names of Soviet scientists brings to them.⁸ Therefore, these self-same business men continue their black dealing, in spite of the protests of our professors. Whether they pray in the course of doing this, just as did their predecessors, pictured by Mark Twain—that, when you come right down to it, is neither here nor there.

But the heart of every decent person is filled with contempt, who views this swindle in print by these gangsters of the American press.

IVAN D. LONDON
Harvard University

In this matter, we must decide whether we are replying to the Russians involved, with their audiences, or whether we should speak to our own psychological audience in this country. I choose the latter.

A. R. Luria became a member of the Editorial Board of the *Journal of Genetic Psychology* with the March number, 1928; and a member of the Editorial Board of *Genetic Psychology Monographs* with the April number, 1928. The great I. P. Pavlov became a member of the Editorial Board of the *Journal of Genetic Psychology* with the June number, 1928; and a member of the Editorial Board of *Genetic Psychology Monographs* with the May number, 1928. V. Borovski and A. L. Schniermann became members of the Editorial Board of the *Journal of General Psychology* with the April number, 1928. K. Kornilov became a member of the Editorial Board of the *Journal of Social Psychology* with the very first issue in February, 1930. I. P. Pavlov, V. Borovski, and A. L. Schniermann each wrote chapters for the *Psychologies of 1930*.

Because of the above official relations, and because I was at that time printing Russian abstracts of all articles in these journals, the Russian delegation to the Ninth International Congress of Psychology, Yale University, 1929, brought me a written invitation from Mrs. Lenin to visit Russia and lecture before the Moscow Academy. Pavlov was the first to inform me that the group had brought the invitation, and that it was written in Russian and in English.

Two or three years ago a member of the diplomatic service of one of the smaller European countries called on me one day and informed me that one of the Russian members of the Editorial Board of one of my journals had been given a public trial, and, though he had not been executed, his knowledge of psychology had undergone a profound change. The diplomat gave me the impression that there might be others later.

⁸ How this practice is to be reconciled with the "unlimited thought control" in an America swept by an anti-Soviet "war hysteria" seems never to have occurred to Comrade Gulia.

Naturally, I was not told the source of such startling information.

A few months ago I received through the Russian Embassy in Washington the first letter of resignation from one of these harassed editors, and shortly afterwards a similar letter from a second editor. Both editors were well known to me, and both men had been guests in my home. Both letters were written as if at gun point, with no trace of acquaintanceship. Both letters were gruff, as if dictated by a professional gangster. Both men asserted bluntly that they had never had any part in the conduct of the journals, that they were not responsible for anything that had ever been published in these journals, and that an announcement of that fact should be made as soon as possible. Between the terrible lines was the almost positive inference that these men were on trial also, and might be executed for some such insult to Stalin as a PhD thesis from one of our leading universities.

In any attempt to evaluate, we must eliminate Pavlov from consideration. At no time was he ever any part of the communist world. He was a relic from an era that had been destroyed, and was a type that could never arise in the communist world of today. These other men had tried to play at the grim game of becoming scientists as the western world understands the term. But at no time were they even close to any such realization. Beginning with the chapters in the *Psychologies of 1930*, and continuing down through the years, at no time was a manuscript from any one of them even close to being a scientific paper. The best of them were without meaning, and the worst of them were ridiculous nonsense.

Why was such a relationship continued for so many years? Ask the mother why she continues association with an unpromising child. Ask the hen why she continues to feed a monstrosity that is not even a chick. But the hatchet-man has come. The play is drawing to a close. When all the world is a stage, what thunder is made with the voices of little men!

CARL MURCHISON
Provincetown, Massachusetts

The last time that I had a direct communication from Osipov was just before our entry into World War II. In 1945 I addressed a cordial letter to him, expressing friendly sentiments for his laboratory in Leningrad, and suggesting that perhaps I could again receive abstracts. He himself did not reply, but some months later I received some abstracts transmitted through official diplomatic channels. No letter or other communication concerning a resignation was ever received. Indeed, the above article contains the first news of Osipov's death in 1947 which has reached this country, at least so far as I know.

The severing of scientific relations with the Soviet psychologists, an action which they are taking, is of particular regret to me since I was first responsible for securing their cooperation when Bekhterev was first appointed an associate editor of the *Psychological Index*, beginning with the volume for 1926. At first the Soviet editors received checks directly from the *Abstracts* in payment for their services. Then at their request payment was made to one of the foreign exchange stores in Leningrad where the sums were held to their credit. Later, also at their request, they were sent American books to the amount of their credits on our books. The heavy hand which is now apparently being laid upon Soviet scientists by their Government and the Party Line contrasts greatly with the situation before World War II.

W. S. HUNTER
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Psychological Writing, Easy and Hard for Whom?

While engaged in an effort to improve the conventional formats of the typewritten and printed page, the writers were impressed with the fact that the precise meaning of many ambiguous sentences may at once be made clear to a reader if he is given an indication as to which word in a sentence should receive maximum stress or emphasis. (See a forthcoming article in the *Proceedings of the National Academy of Sciences*.) It is apparently possible in the majority of sentences to select reliably the one word which carries what may be called the "peak" stress of the statement. At any rate, many subjects are able to perform this operation in a manner satisfying to themselves and with a consistency which was quite unexpected (to us).

As a somewhat diversionary offshoot to our major endeavors, we decided to investigate the peak stress as a possible criterion of *readability*. We have presented evidence elsewhere "indicating that the ability of the subject to understand a prose passage may be given in quantitative terms by noting which words the subject stresses as important when he reads the passage aloud" (1, 404). A typical experiment may be cited: A group of college freshmen were first given the standardized Nelson-Denny Reading Test. The same students were then given the task of selecting in a series of sentences the one word in each sentence that they would stress the most were they to read the passage aloud. The "correct" word in each sentence—i.e., the word which should, in the opinion of the writers, carry the peak stress—was selected beforehand but known only to the experimenters. Despite this crude procedure, the obtained correlation between the students' scores on the standardized reading test and their scores on the peak stress test turned out to be of about the same order of

TABLE I
Agreement between subjects on peak stress and rank order for readability

Author	Title	Agreement Between Subject on Word of Peak Stress	Rank Order of Books for Readability
Boring and Van de Water	<i>Psychology for the Fighting Man</i>	41.0%	3
Woodworth	<i>Psychology</i>	37.8%	4
Boring, Langfeld and Weld	<i>Introduction to Psychology</i>	49.0%	2
Allport	<i>Personality</i>	56.4%	1
Morris	<i>Signs, Language and Behavior</i>	37.5%	5

correlation as that which is usually obtained between two different standard reading tests.

With this admittedly incomplete but encouraging evidence of the validity of the process, we set forth to employ the idea of peak stress as a criterion of readability, somewhat after the manner of Flesch (2), and with particular reference to the use of the Flesch index of readability by Stevens and Stone (4), whose title incidentally we have borrowed for this article with an added *for whom?* In essence, 20 sections of about 100 words each were selected at equal intervals throughout each of the five psychology books shown in Table 1. Two undergraduate psychology majors, unfamiliar with all aspects of the problem, were then asked to read the 20 sections in each book and, working quite independently of one another, to select the *one* word in each sentence which they would stress the most were they to read that sentence aloud. (No further definition of "stress" was made.)

When the two subjects had completed this task, their results were compared sentence by sentence to determine in how many of the sentences in each book they had agreed upon exactly the same word as carrying peak stress. For comparative purposes, the observed agreements were corrected because of varying sentence length between books. The reported percentages were also reduced in accordance with chance agreement—the assumption in the latter case being that any word in a sentence had an equal chance of being selected by a subject who was merely guessing. Table 1 gives the percentage success between the two subjects in agreeing upon words of peak stress for the five books investigated. Table 1 also gives the rank order of "readability" for these books in terms of these two subjects only.

The (again to us) completely surprising result of this experiment is that in two texts such as Allport's and Boring, Langfeld and Weld's our two subjects se-

TABLE 2

Flesch score and rank order of readability

Author	Title	Flesch Score	Rank Order of Readability
Boring and Van de Water	<i>Psychology for the Fighting Man</i>	3.54	1
Woodworth	<i>Psychology</i>	4.87	2
Boring, Langfeld and Weld	<i>Introduction to Psychology</i>	5.11	3
Allport	<i>Personality</i>	5.99	4
Morris	<i>Signs, Language and Behavior</i>	6.72	5

lected, on the average, exactly the same word for peak stress in every other sentence read by them. Since this performance is absurdly improbable if the task were not highly related to comprehension and since the times spent by the subjects on the five books were approximately the same, we conclude that by the token of peak stress both *Introduction to Psychology* and *Personality* are relatively readable books, at least for the two subjects we happened to use. On the other hand, and again for our two subjects only, the limited vocabulary, short-sentenced *Psychology For the Fighting Man* is not especially readable.

It perhaps is true, therefore, that some materials which at first sight appear to comprise complicated sentence structures, with advanced vocabularies, polysyllabic words and increased length of sentences, may prove to be more easily read by certain classes of readers than material presented in what is now usually regarded as a simpler and more concise style.

There is evidence from other experimental work, as might be expected, that the percentage of agreement between subjects in selecting words of peak stress would be increased if the subjects had been permitted to read the five books in their entirety, i.e., if they had been given the benefit of contextual clues. Further, as one might also expect, there is evidence that rereading of the books would result in still higher percentage agreement between subjects.

There is thus in peak stress, as defined above, the possibility of a rather delicate method which may be applied to the formulation of reading tests, to the investigation of new facets of readability, and particularly to the evaluation of the efficiency of various printed formats as modes of communication.

For comparative purposes we may now refer to the interesting research of Stevens and Stone into the writings of various psychologists. The yardstick which Stevens and Stone applied in making tentative readability evaluations of these writers was the Flesch readability formula, i.e., $\text{Difficulty} = .1338L + .0654A$

— $.0659P - .75$, where L is average sentence length; A is number of affixes per 100 words; P is number of personal references per 100 words.

By Stevens' and Stone's calculations, application of this formula yielded the Flesch scores shown in Table 2 for the same five books which were rated above in Table 1 by what may be designated as the "peak stress" method.

For an accounting of the differences in the ratings for readability as between Tables 1 and 2, it may be suggested that for college majors in psychology reading psychological materials at their own level of interest, longer sentences of more complicated structure and longer words with prefixes and suffixes may result in more comprehension per unit of time for the very reason that the longer sentences, words, and ideas yield on the average greater precision as to meaning than do the simpler modes of expression. *Nota bene* the previous sentence!

To which may be added the following comment of Rosenzweig with reference to the findings of Stevens and Stone.

Simplicity in writing is much to be desired—yes. Long sentences which add only words, affixes which merely signify the professional fixation of their user, and an abstract style which could well be brought to life with personal references—all these are qualities to be deplored. But let us still have long sentences when the thoughts are long, affixes if they save sentences, and even an abstraction or two without benefit of personal reference . . . (3, p. 524).

Certainly "peak stress" is not to be recommended as a measure of readability on the basis of the very limited data reported here. But there seems to be enough validity in the general method to warrant further study. In any event, Stevens and Stone were correct when they asserted that "obviously the last word on readability has not been said" (5).

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APA and Division Elections

This letter was prompted by the following paragraph from the Newsletter of the Division of Clinical and Abnormal Psychology (1952, No. 3).

Last Spring, in spite of the fact that the Divisional membership had increased, the number of nominating ballots returned by the membership declined from a grand total of 227 to a grand total of 154. In the opinion of present and past officers of your division, this represents one of the most serious defects in the membership of the organization, its failure to express its will in relation to its own future leadership.

Membership in any society which is based upon democratic principles involves active participation from each member. In small groups, intimate discussion and planning is not only possible, but practical. As the size of the group increases this practicality decreases, then disappears. It, therefore, becomes necessary for groups to designate certain of their members to represent them in the affairs of the larger organization.

But this does not release the individual from his responsibilities as a member of the group. For when these responsibilities are sloughed off by the individual they must be assumed by someone. Usually this falls to some one of the designated representatives. Over a period of time "George has done it" so well that we "let George do it" all the time. Eventually some individual or group raises the cry that the organization is run by a clique, or that they have no choice in the running of the organization. There are 1135 members of Division 12 who are asleep. They are "letting George do it." And then there are rumblings that things are not as they should be.

Certainly this attempt to arouse the electorate comes too late for the current Division 12 nominations, but it is not too late for the final ballot for APA president-elect and the officers of divisions. If a similar situation obtains in the other divisions or in the entire Association, then we are in a grave situation indeed.

B. MILLER EVES
University of Pennsylvania

It Says Here in Fine . . .

It is a widespread practice among APA journals (also among non-APA journals) reporting experimental work to use print of a larger and smaller size, the latter presumably for the purpose of conserving space. It is also the habit to assign the smaller size print to those sections of the report which deal with methodology and procedure. I am not aware of the reasons prompting such an assignment, but I feel there are a couple of good arguments against it.

In the first place, whatever operational content the "findings" and conclusions of a reported investigation may have must usually be dug out of the statement on the procedures and methodology. If, for example, faster learning occurred under condition A than under condition B, the precise definitions of "learning" and of the conditions involved must be sought within the fine print. In the broader problem of attempting to analyze the work done in an experimental area, leads are obtained, paradoxes resolved, and insights gained, perhaps more often by recourse to what the various *Es did* in their experiments than to any other information available in their reports. It goes without saying that in order fully to understand the significance of the experimental results, the operations employed including apparatus, handling of Ss, training procedures, and measures and statistics used, need to be thoroughly understood. Yet this necessary task, rather than being encouraged, I am afraid is, quite oppositely, being obstructed by the penalty of small print.

Moreover, it is probably the case that a majority of readers find the introductory and discussion sections of a report of greater intrinsic interest than those parts devoted to methodology. Since these parts are of at least equal importance, it seems that any motivational influence the editors might wield ought to be in the direction of countering rather than emphasizing this natural disposition.

Finally, there is the danger of implying to the newcomer, by what might be taken to be the intimation of authority, that such sections of the experimental report are somewhat less important than those set in larger type.

M. R. D'AMATO
New York University

Psychological Notes and News

Julia Mathews died on December 3, 1951 at the age of 77.

Clark L. Hull died of a heart attack on May 10, 1952 at the age of 67.

His portrait had been presented to Yale University on April 10 in a ceremony commemorating his 23 years of service to the University. The portrait was painted by Deane Keller, professor of painting at Yale, and was presented by Carl I. Hovland on behalf of more than 100 present and former associates and students of Professor Hull. Provost E. S. Furniss accepted the portrait for the University.

Leonard Carmichael, president of Tufts College since 1938, has been appointed Secretary of the Smithsonian Institution, effective next January.

Frank A. Beach has been appointed Sterling Professor of Psychology at Yale University. Professor Beach has been at Yale since 1946.

L. L. Thurstone, Charles F. Grey Distinguished Service Professor of Psychology at the University of Chicago, completed his teaching residence at the end of the Winter Quarter and will move to his new professorship at the University of North Carolina during the summer. He becomes Emeritus Professor at Chicago on October 1, 1952. The Psychometric Laboratory that he organized will be continued in Chicago with Lyle V. Jones as Acting Director. Thelma Gwinn Thurstone leaves her position as Director of the Division of Child Study, Chicago Board of Education, and Research Associate, Department of Psychology, University of Chicago, to become professor in the School of Education at the University of North Carolina in September.

Carl I. Hovland of Yale University was elected to the Board of Trustees of the Russell Sage Foundation at the last meeting of the Board.

W. Leslie Barnette, Jr., director of the Vocational Counseling Center and assistant professor in psychology at the University of Buffalo, is the recipient of a Fulbright Fellowship for lecturing in psychology and vocational guidance in India for

the coming academic year. He will be visiting professor at the Central Institute of Education at the University of Delhi. Part of his duties will consist in the establishment of a vocational guidance center, a pilot project as a preliminary step by the government of India towards the establishment of a series of such counseling centers.

Milton L. Rock has been appointed vice president of Edward N. Hay & Associates, Inc., Management Consultants, Philadelphia, Pennsylvania.

Esther R. Steiner has left her position as personnel psychologist with the New York Fire Underwriters to join the staff of the New York State Labor Department as an employment counselor in the Industrial Division.

J. David O'Dea, formerly on the faculty at Oregon State College and with the Oregon State-Wide Extension System, has been appointed assistant professor of student personnel services, University of Wisconsin, Milwaukee Extension Division. He will begin his duties July 1.

Morris Goodman, formerly with the Lowell VA Mental Hygiene Unit, is now on the staff of the Newark VA Mental Hygiene Unit.

Gordon L. Macdonald resigned as chief psychologist at the Toledo State Hospital, effective April 30, to enter private practice in industrial psychology in Toledo.

Alexander J. Darbes has resigned as instructor in psychology at Western Reserve University to accept the position of director of research in the psychology department of Cleveland State Hospital, Cleveland, Ohio.

John S. Pearson has transferred from his position as supervisor of the Minnesota Bureau for Psychological Services to the position of clinical psychologist at the Rochester, Minnesota State Hospital.

During the past year, the new Department of the Army, Human Resources Research Office has been getting underway. Through an administrative type contract between the Department of the Army and The George Washington University

this office has been established to do research in the areas of Training Methods; Motivation, Morale, and Leadership; and Psychological Warfare. Harry F. Harlow of the University of Wisconsin was instrumental in setting up the contract while he was Scientific Adviser to the Research and Development Board, G-4, Department of the Army. Since August 1951, the new office has been assembling a staff, planning and participating in research projects, and establishing Field Units through the Office, Chief of Army Field Forces. It is planned that some sixty research scientists will be assembled by the end of the summer for the Central Office and the Field Units.

Major staff appointments have been made as follows: Meredith P. Crawford, director, now on duty; Kenneth W. Spence, assistant director of training methods, Washington Office, on leave from The State University of Iowa, to begin August 1; John L. Finan, assistant director for motivation, morale, and leadership, Washington Office, now on duty, on leave from Oberlin College; Carleton F. Scofield, assistant director of psychological warfare, to begin July 1, on leave from the University of Buffalo; Henry J. Schroeder, executive for administration, now on duty. At Army Field Forces Human Research Unit No. 1, James S. Calvin, on leave from the University of Kentucky, is acting as director of research, Stanford C. Ericksen will be on leave from Vanderbilt next year as director of research. This Unit is located at Fort Knox, Kentucky and has primary responsibility for training methods research. Launor F. Carter, on leave from the University of Rochester, is director of research at Army Field Forces Human Research Unit No. 2 at Fort Ord, California. This Unit is concerned with research in motivation, morale, and leadership. It is expected that a third unit will be established for research in psychological warfare.

The Field Units are under the operational control of the Office, Chief of Army Field Forces where Lt. Col. Howard O. Holt is Staff Officer responsible. The whole program is under the direction of the Assistant Chief of Staff, G-1, Department of the Army, under the cognizance of the Human Relations Research Branch, headed by Col. Charles C. Hill, assisted by Major J. Mowbray and Harry W. Braun. This Office coordinates all Human Resources Research in the Department of the Army. The Human Resources Research Office (HumRRO) conducts research by three methods: (a) task force

teams proceed from the Washington Office to Army installations within the United States and overseas to perform specific research missions, (b) field units perform research at the installations where they are located and nearby military installations, (c) subcontracts are written from the Washington Office with universities and private research organizations.

A complete list of staff members for the Central Office and the Field Units will appear in an issue of the *American Psychologist* in the early fall.

Reprinting of the Journal of Projective Techniques. E. M. L. Burchard, president of the Society for Projective Techniques and the Rorschach Institute, Inc., has announced that at a recent meeting of the Executive Committee of the Society, it was decided to reprint the first ten volumes of the *Journal of Projective Techniques*, many issues of which have been out of print for some time. Back issues will be sold at the original price of \$6.00 per volume and may be ordered from the Office of the Secretary of the Society, 609 West 196 Street, New York 34, New York.

The staff of the clinical psychologists of the Jewish Board of Guardians now consists of Leah Levinger, supervising psychologist, Leo Nagelberg, Ruth Ochroch, and Kathryn Werner.

Rohrer, Hibler & Replogle announce the opening of a branch office May 1 in Milwaukee, Wisconsin, with the appointment of Kenneth W. Vaughn, Branch Manager in Charge. Thomas Blackwell joined the organization on March 7 and will eventually be connected with the Dallas office, and Edward J. Keyes joined the company in the New York office on June 1.

Alfred B. Udow has joined the advertising agency of Monroe F. Dreher, Inc., in New York as a partner. He will be director of media and research.

At the University of Oregon, Leona E. Tyler, associate professor of psychology, who has been on sabbatical leave for the academic year of 1951-52 studying in England, will return in June. She has accepted an appointment as visiting professor for the summer session at Stanford University and will take up her regular duties at the University of

Oregon in the fall. **Richard A. Littman**, assistant professor of psychology, has been awarded a Faculty Fellowship for the academic year 1952-53 by the Fund for the Advancement of Education.

Mabel R. Farson was promoted from psychologist to special assistant in charge of psychological services in the school district of Philadelphia, Pennsylvania, as of February 1, 1952.

Robert F. Pearse has been appointed director of the executive selection and development department of the Harold F. Howard Company, industrial and management engineering consultant, in Detroit.

Ira Hirsch has been appointed to the APA Committee on Psychology in Other Professional Schools.

Additional Directory Errors. Since the list published in the April issue of this JOURNAL, the following three corrections have been received:

Page 65. Bures, Charles E. APA membership status should be as follows: *A(40) 3, 8.*

Page 259. Krathwohl, David R. Delete *PhD 51 (Dec).*

Page 479. van Saun, H. Richard. Delete *PhD 51 (Dec).*

The American Board of Examiners in Professional Psychology announces the scheduling of its fourth written examinations for November 13-14, 1952. These examinations will be given simultaneously at several centers in order to minimize the amount of travel required of any candidate.

Each eligible candidate is being notified individually regarding this examination.

The Board wishes to repeat its policy concerning examination privileges, which was announced in the May, 1951 issue of this JOURNAL.

An eligible candidate holding the PhD degree who is notified regarding his eligibility for two successive written examinations and who does not present himself for either of these examinations will have his candidacy set aside as inactive. His eligibility for future examinations will have to be determined by an additional review of his candidacy, reactivated at his own request, under such additional conditions as the Board shall specify.

Eligible candidates whose baccalaureate degrees were received prior to December 31, 1935, and who present ten years of experience without the PhD degree, who are held for written and oral ex-

amination, are required to take the first written examination scheduled after the Board's final decision in their case, provided that they be given six months' notice in advance of the scheduled time of this examination. This announcement of policy is presented for the information and guidance of candidates in this category who will have received individual notices of their eligibility for this examination. Failure to report for the November, 1952 examination will result in a closing of the candidacy and reconsideration can be given only upon presentation of evidence regarding the completion of the PhD degree.

Questions regarding this examination should be addressed to Noble H. Kelley, Secretary-Treasurer, American Board of Examiners in Professional Psychology, Department of Psychology, Southern Illinois University, Carbondale, Illinois.

Call for Papers, Section I, AAAS. Section I (Psychology) of AAAS will meet December 29-30, in St. Louis. Abstracts should be submitted to the section secretary, Delos D. Wickens, 404 University Hall, The Ohio State University, Columbus 10, Ohio. They should not exceed 600 words excluding title and should include the author's job affiliation along with the name as he would like it to appear on the program. Papers may be submitted by persons who are not members of AAAS. The abstracts should be in the hands of the secretary not later than *September 15, 1952.*

The Committee on Psychotherapy of the APA Division of Clinical and Abnormal Psychology is in the process of forming a library of protocols representing the treatment work of therapists with different orientations. The purpose is to make available to properly qualified persons, in teaching and research in the field of psychotherapy, resources which might not otherwise be available.

The first step in this project is to ascertain what records are now being used and in what form. The records do not necessarily need to be verbatim, although the Committee is especially interested in such recordings. Complete transcripts are also not necessary when representative parts of a course of treatment illustrate a therapeutic process or technique.

Specifically, the Committee would like the following information from all those teaching or doing research in psychotherapy: (a) whether recordings are being made of counseling or psychotherapeutic

contacts; (b) type of recording medium used; (c) type of cases recorded; (d) completeness of case recording; (e) all other pertinent information on patient available and availability of therapist's notes such as his observations, thinking, and conclusions; (f) extent to which either typed scripts or mimeographed material has been prepared on verbatim recordings and other cases not recorded verbatim; (g) willingness to make available to the Committee the original recordings or typed scripts for study, and the conditions for permission to include them in the library. No records would be made available to others without suitable safeguards for the protection of the patient.

Any inquiries or suggestions relative to the forming of such a library of therapeutic protocols should be directed to Robert A. Young, Chairman, Psychotherapy Committee, 38 Beacon Street, Boston, Massachusetts.

The APA Committee on Test Standards, at a meeting in Cleveland on April 27-28, completed a draft of recommendations regarding information to be presented in a psychological test manual. An estimated 165 manhours of work at this session extended drafts previously prepared and revised them in the light of criticism from measurement specialists. The recommendations will be examined by the APA membership during the next year and further revised before presentation to the Council for adoption. To provide members an opportunity to comment, the present draft will be published in the August *American Psychologist*, and discussed in an open meeting during the Washington convention.

The Interamerican Society of Psychology was formed during the International Congress of Mental Health held in Mexico City last December. Officers are Eduardo Krapf, University of Buenos Aires, president; Werner Wolff, Bard College, vice-president; Oswaldo Robles, University of Mexico, secretary; Hernan Vergara, University of Bogota, treasurer; W. Line, Canada, Enrique B. Roxo, Brazil, Carlos Nassar, Chile, Jaime Barrios Pena, Guatemala, associated vice-presidents. The society has a Latin-American office at the University of Mexico and a U. S. office at Bard College.

The purpose of the society is to work toward interamerican cooperation and mutual understanding by means of psychological collaboration on basic scientific, educational, and sociopsychological

issues. Further aims are to organize an interchange of students and teachers, to found a bilingual journal on topical issues and opinion exchange, and to establish a film library. An interamerican library will be established in the Latin-American and the U. S. offices. It will be appreciated if authors would send copies of their work to Dr. Oswaldo Robles, Facultad de Filosofia y Letras de la Universidad de Mexico, San Cosme 71, Mexico D. F.

The annual membership fee is \$5.00. All funds will be used to finance the Congress, to establish an Interamerican Journal of Psychology, and to found the planned film library.

Applications for membership of American psychologists, accompanied by a curriculum vitae, should be sent in triplicate to the vice-president, Dr. Werner Wolff, Bard College, Annandale-on-Hudson, New York.

The Personnel Psychology Association of Northern Ohio has been organized recently. The group consists of 35 alumni and advanced graduate students in the industrial psychology program of Western Reserve University. The purpose of the organization is to discuss problems and ideas in the personnel field. There are no bylaws or dues; the only expense of the group is the mailing of announcements of meetings which is handled by the Personnel Research Institute of Western Reserve University. A majority of the group are in business and industry. The monthly meetings are held in conference rooms of the firms represented.

A committee has been selected by the Society for the Psychological Study of Social Issues to judge the entries of candidates for the Society's Industrial Relations Research Award. The judges are Solomon Barkin, Daniel Katz, Arthur Kornhauser, William F. Whyte, and James Worthy. The Award, a \$500 U. S. Government Bond, will be presented at the September meeting of the APA to the person whose research is judged most valuable as a scientific contribution to the understanding of labor-management relations. Inquiries concerning the award should be addressed to Mrs. Helen S. Service, Assistant Secretary, SPSSI, Department of Psychology, Columbia University, New York, N. Y.

The Proceedings of the APA for 1892-1893—the anonymous brochure that describes the pre-

liminary meeting at Clark in July 1892 and the first and second regular meetings in December 1892 and 1893—may still be presumed to have had these accounts prepared by Jastrow who was Secretary in these years (cf. *Amer. Psychologist*, 1952, 7, 95-97), but it has now become clear that James McKeen Cattell arranged to have this pamphlet published and edited it. See his own statement in *Science*, 1917, 45, 279, or in *James McKeen Cattell: Man of Science*, 1947, II, 339. Cattell became Secretary of the APA in 1894 and began, with the 1894 meeting, the publication of the Proceedings in *Psychol. Rev.*, 1895, 2, 149-172. Always with an anticipatory eye on history, he must first in 1894 have published the accounts of these first three meetings in order that the record might be complete.

The Cornell Social Science Research Center is sponsoring a Field Methods Training Program under a Ford Foundation grant intended to increase research capacity in the behavioral sciences. This program, which began in September 1951, is set up on a two-year basis. Its goal is the establishment of a new type of training course in interviewing and observation for graduate students in social science disciplines. Urie Bronfenbrenner, department of child development and family relationships; J. Dean, department of sociology and anthropology; and W. F. Whyte, New York State School of Industrial and Labor Relations, form the advisory committee and S. A. Richardson is the project director. The training course will be conducted on an experimental basis for the academic year 1952-53. Persons interested in participating in the course should communicate with S. A. Richardson.

The National Society of College Teachers of Education has organized a section on educational psychology as a means of bringing together those who are teaching educational psychology at institutions of various types, ranging from small denominational colleges to large universities. All teachers of educational psychology who are interested in knowing more about the work of this section or in joining it are invited to write to Dr. Harry N. Rivlin, President of the Educational Psychology Section of the NSCTE, Queens College, Flushing, New York.

Predictions of enrollment in institutions of higher education in the fall of 1952 have been made by the Higher Education and National Affairs Bulletin (No. 181) of the American Council on Education. It seems probable that enrollment in 1952 will be slightly lower than in 1951. However, engineering and physical sciences may show an increase, and liberal arts will probably remain about the same as in 1951. After this fall it is predicted that enrollment will gradually increase for about five years, and then will sharply increase until about 1960. These predictions were made on the basis of the following facts: (a) any change of policy of student deferment is unlikely; (b) over half of the entering college freshmen are under 18½ and thus are sure of one year of college and possible future deferment; (c) relatively few of those over 18½ will probably be called during the summer; (d) by next fall 265,000 men will have been discharged and by the following fall there will be an additional 460,000; (e) the birth rate in the U. S. has been steadily increasing since the 1930's; (f) in general, an increasing proportion of the college-age population has been entering college.

A training and research workshop in group leadership and membership skills will be held August 10 to 30, 1952 at the University of Delaware under the joint auspices of the Fels Group Dynamics Center, Temple University, and the Institute of Human Relations of the University of Delaware. Application forms may be obtained from Workshop in Social Dynamics, Fels Group Dynamics Center, Temple University, Philadelphia 22, Pa.

Graduate student stipends at Texas Technological College, Lubbock, Texas. Apply for admission to Registrar's Office. GRE and MAT not required. Tuition: resident, \$25; nr, \$150 a year. No scholarships. Nine counseling assistantships (six women, three men) in residence halls; 14 hours' work; stipend \$810 (plus nr fees for nr students) for nine months. One teaching fellowship; 10 hours' work; stipend \$500 ex. Apply by August 1 to Dr. Lehman C. Hutchins, Head, Dept. of Psych.

The Department of Psychology of Southern Methodist University announces the initiation of the Sol Dreyfuss Memorial Fellowship in Psychology. This Fellowship represents an annual gift of

\$1,500 on the part of Mr. and Mrs. Lawrence Pollock of Dallas, and will be awarded for the first time for the 1952-53 school year. The Fellowship is designed to cover study and research in the field of human relations in industry, and is intended for a student working on the MA degree in the department of psychology. It will require no outside work on the part of the recipient.

Those interested in applying for the Fellowship should write as soon as possible to A. Q. Sartain, Chairman, Department of Psychology, Southern Methodist University, Dallas, Texas.

Graduate assistantships in systems analysis for the academic year 1952-53 have been announced by Tufts College. They are open to men and women with training in mathematics, natural or social sciences, or engineering who are candidates, for a master of science degree. The assistant's time will be devoted to research and study in the Department of Systems Analysis, and both study and research will be carried on at the Naval Research Laboratory, Washington, D. C. Stipend is \$1,600 to \$2,000 with remission of tuition. Inquiries and applications should be addressed to the Dean of the Graduate School, Tufts College, Medford, Massachusetts. Applications must be received by July 1, 1952.

Graduate assistantships, 1952-53, Reading Laboratory and Clinic, University College, University of Florida. Preference given to applicants with training and experience in diagnostic and remedial work in reading and clinical psychology. Duties: 12 hours weekly teaching and clinical work in reading clinic serving mainly college students but some elementary and secondary pupils. Stipend, \$100 per month for 8½ months, plus remission of nonresident tuition of \$175 per semester; remaining tuition is \$100 per year. New students eligible, appointments renewable. Apply to Dr. George Spache, Reading Laboratory and Clinic, 310 Anderson Hall, University of Florida, Gainesville, Florida.

The Post Graduate Center for Psychotherapy, Inc. announces that a new In-Service Training Program for matriculated students is to be instituted. Application forms and information concerning requirements for eligibility may be secured from Mrs. Janice Perry, Registrar, 218 East 70 Street,

New York 21, N. Y., TRfalgar 9-7100. The number of fellowships for 1952-53 is limited. Applications should be filed as soon as possible and *not later than June 15, 1952.*

The Committee on Diagnostic Reading Tests, Inc. will sponsor the annual Work-Conference on Reading at the University of Maryland, July 21-August 1. The conference will be held for students with background in either reading or testing or both who want to improve their skills. It will carry no university credit, but a certificate of attendance will be given upon request. Admission to the conference is limited. Application forms may be obtained from Dr. Frances Triggs, University Counseling Center, University of Maryland, College Park, Maryland.

A guidance workshop to be held July 21-August 21, 1952 is being planned by the office of Guidance Services of the Nevada State Department of Vocational Education, in cooperation with the University of Nevada. Herman J. Peters will be the director. Those interested in further details should write to Sam Basta, State Supervisor of Guidance Services, State Department of Vocational Education, Carson City, Nevada.

Elizabeth Anderson of McLean Hospital, Boston, will give an introductory course in handwriting analysis in the workshop in projective techniques at the New School for Social Research this summer.

The Psychological Cinema Register has recently issued an entirely revised catalog listing 238 films. Copies may be obtained from the Psychological Cinema Register, Audio-Visual Aids Library, The Pennsylvania State College, State College, Pennsylvania.

Notices of vacancies are no longer being printed in the *American Psychologist*. The APA Placement System is now issuing an employment bulletin containing announcements of "situations wanted" and "situations available." This bulletin is described in detail in Across the Secretary's Desk in the May *American Psychologist*. The first issue of the bulletin was mailed to subscribers on May 15. APA members interested in subscribing to the bulletin may obtain information about it by writing to the APA office.

Convention Calendar

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September 1-6, 1952; Washington, D. C.

For information write to:

Dr. Fillmore H. Sanford
1515 Massachusetts Avenue N.W.
Washington 5, D. C.

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August 25-30, 1952; Brussels, Belgium

For information write to:

Mrs. Grace E. O'Neill
Division of World Affairs
National Association of Mental Health
1790 Broadway
New York 19, New York

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COMMITTEES FOR THE 1952 CONVENTION OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

APA Convention Program Committee

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Leonard W. Vaughan, Arrangements for Care of Children
Curtis Tuthill, Films and Projectors

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Audio-Visual Aids: James J. Gibson, Chairman

1952 APA Convention Manager: Sherman Ross

LISTING OF PROSPECTIVE FELLOWS

The Board of Directors wishes to call attention to a new procedure in connection with the nomination and election of Fellows of the Association.

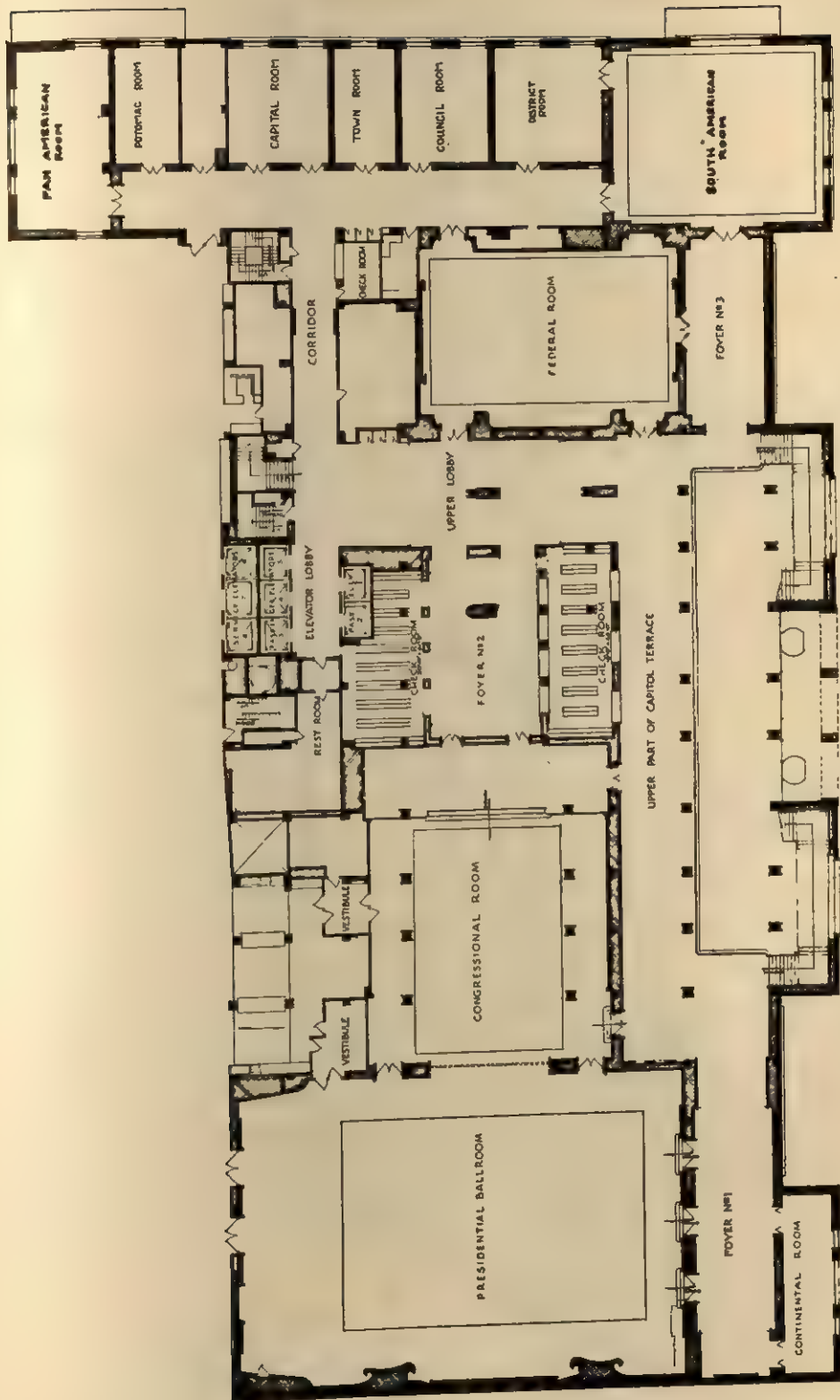
At the Washington meeting, the names of all persons currently under consideration for election to Fellowship status and their sponsors will be posted near the Registration Desk. Members of the Association having any question or comments concerning the qualifications of such persons are invited to speak to the Board members informally or to address the Board in writing (c/o APA Central Office, Statler Hotel). Such communications should be received not later than 5 P.M., Tuesday, September 2.

This provision is offered as an opportunity to raise questions about candidates prior to Council meetings. It is contemplated that a somewhat different procedure, having the same purpose, will be inaugurated in 1953.

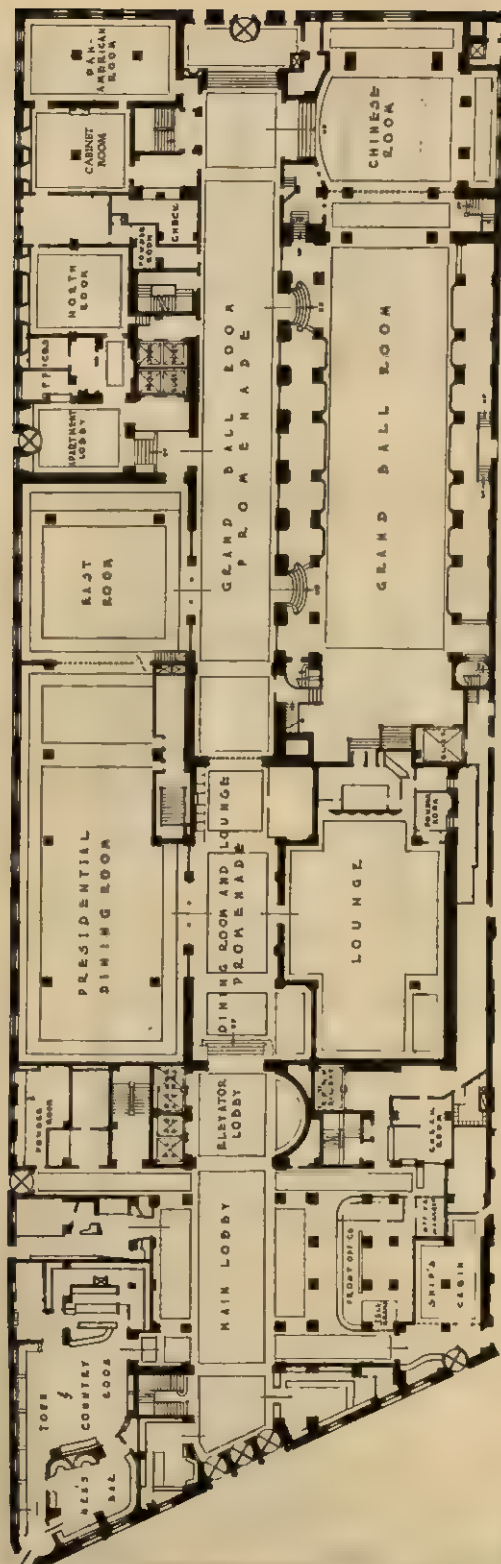
The procedure for election of Fellows is now as follows: upon recommendation of divisions or division membership committees, applicants are reviewed by the Board of Directors and, when deemed fully qualified, are nominated to the Council of Representatives for election.

DIVISIONS OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

1. Division of General Psychology
2. Division on the Teaching of Psychology
3. Division of Experimental Psychology
5. Division on Evaluation and Measurement
7. Division on Childhood and Adolescence
8. Division of Personality and Social Psychology
9. The Society for the Psychological Study of Social Issues
10. Division on Esthetics
12. Division of Clinical and Abnormal Psychology
13. Division of Consulting Psychology
14. Division of Industrial and Business Psychology
15. Division of Educational Psychology
16. Division of School Psychologists
17. Division of Counseling and Guidance
18. Division of Psychologists in Public Service
19. Division of Military Psychology
20. Division on Maturity and Old Age



MEETING ROOMS, MEZZANINE FLOOR, STATLER HOTEL



MEETING ROOMS, FIRST FLOOR, MAYFLOWER HOTEL

PROGRAM

AMERICAN PSYCHOLOGICAL ASSOCIATION

BOARD OF DIRECTORS

9:00-5:00 P.M., 7:30-11:00 P.M., Saturday (August 30) and 9:00-5:00 P.M., 7:30-11:00 P.M., Sunday, Potomac Room, Statler

J. McV. HUNT, President

FILM SHOWINGS ARRANGED BY THE COMMITTEE ON AUDIO-VISUAL AIDS

JAMES J. GIBSON, Chairman

Sessions on Clinical Psychology

9:00-12:00 M., Monday and Wednesday, District Room, Statler

- 9:00 A.M. MIRIAM SIEGEL and RUTH MUNROE. *Giving the Rorschach Test: Klopfer Method.* (9 minutes, sound, black and white and color.)
- 9:10 A.M. RUTH MUNROE. *Administration of Projective Tests.* (19 minutes, sound, black and white.)
- 9:30 A.M. W. A. LUNDIN. *Projective Movement Sequences.* (Experimental projective test, 5 minutes, silent, black and white.)
- 9:40 A.M. C. R. ROGERS and R. H. SEGEL. *Client Centered Therapy I.* (30 minutes, sound, black and white.)
- 10:10 A.M. C. R. ROGERS and R. H. SEGEL. *Client Centered Therapy II. Therapy in Process—The 32nd Interview.* (30 minutes, sound, black and white.)
- 10:45 A.M. J. H. MASSERMAN and C. PECHTEL. *Experimental Neuroses in Monkeys.* (19 minutes, silent, black and white.)
- 11:10 A.M. NATIONAL FILM BOARD OF CANADA. *Feelings of Depression.* (30 minutes, sound, black and white.)

Sessions on Child Development

2:00-4:00 P.M., Monday and Wednesday, District Room, Statler

- 2:00 P.M. E. B. HURLOCK. *Heredity and Prenatal Development.* (21 minutes, sound, black and white.)

2:25 P.M. L. J. STONE. *A Long Time to Grow: Part I. Two and Three Year Olds in Nursery School.* (35 minutes, sound, black and white.)

3:00 P.M. H. D. BEHRENS. *A Study of Twins: Part IV.* (19 minutes, silent, black and white.)

3:20 P.M. A. GESELL and others. *Embryology of Human Behavior.* (28 minutes, sound, color.)

Sessions on Films for the Introductory Course in Psychology

2:00-4:30 P.M., Tuesday and Thursday, District Room, Statler

A series of recent films will be shown which have been selected by the Committee on Audio-Visual Aids as potentially useful for the elementary college course in psychology. A list of the titles in this series may be obtained at either session.

BUSINESS MEETING OF THE CONFERENCE OF STATE PSYCHOLOGICAL ASSOCIATIONS

9:00-11:30 A.M., Monday, Council Room, Statler

BRUCE V. MOORE, Chairman

SYMPOSIUM ARRANGED BY THE CONFERENCE OF STATE PSYCHOLOGICAL ASSOCIATIONS: THE PUBLIC RELATIONS OF PSYCHOLOGY

2:50-4:50 P.M., Monday, Council Room, Statler

LLOYD N. YEPSEN, Chairman

Participants:

GERHART D. WIEBE, *Columbia Broadcasting System Radio Research.*

LUCY FREEMAN, *New York Times.*

GEORGE W. ALBEE, *American Psychological Association.*

Representative of Science Press Writers.

Representative of the General Public.

COMMITTEE ON SCIENTIFIC AND PROFESSIONAL ETHICS

2:50-6:00 P.M., Monday, Room 237/8, Mayflower

GILBERT J. RICH, Chairman

ADDRESS OF THE PRESIDENT OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

8:00 P.M., Monday, Presidential and Congressional Rooms, Statler

ROBERT R. SEARS, Chairman

J. McV. HUNT, Presidential Address.

RECEPTION FOR MEMBERS OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

9:15 P.M., Monday, Federal and South American Rooms, Statler

FIRST SESSION, COUNCIL OF REPRESENTATIVES OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

9:00-5:00 P.M., Tuesday, South American Room, Statler

J. McV. HUNT, President

The sessions of the Council of Representatives are open meetings. All members of the APA are invited to attend.

POLICY AND PLANNING BOARD

9:00 A.M., Wednesday, Room 237/8, Mayflower

LYLE H. LANIER, Chairman

LUNCHEON FOR THE MEMBERS OF APA COMMITTEES

1:00 P.M., Wednesday, North Room, Mayflower

INVITED ADDRESS

4:00 P.M., Wednesday, Presidential and Congressional Rooms, Statler

LAURANCE F. SHAFFER, Chairman

ALAN T. WATERMAN, *Director, National Science Foundation.* The National Science Foundation and the Life Sciences.

SYMPOSIUM: PROBLEMS OF SPECIALIZED MANPOWER

8:00 P.M., Wednesday, Ballroom, Mayflower

E. LOWELL KELLY, Chairman

DAEL WOLFE, *Director, Commission on Human Resources and Advanced Training, Associated Research Councils.*

ELI GINZBERG, *Director of Research, National Manpower Council.*

LEONARD CARMICHAEL, *President of Tufts College.*

M. H. TRYTTEN, *Director, Office of Scientific Personnel, National Research Council.*

MAJOR GENERAL LEWIS B. HERSHEY, *The Director of Selective Service.*

SECOND SESSION, COUNCIL OF REPRESENTATIVES OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

9:00-12:00 M., Thursday, South American Room, Statler

J. McV. HUNT, President

ANNUAL REPORT TO THE MEMBERS OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

8:00 P.M., Thursday, Presidential and Congressional Rooms, Statler

CARROLL L. SHARTLE, *APA Finances and the 1953 Budget.*

DOROTHY C. ADKINS, *Major Decisions of the 1952 APA Council Meetings.*

FILLMORE H. SANFORD, *Annual Report of the Executive Secretary.*

PUBLICATIONS BOARD

9:30-12:30 P.M., Friday, Room 237/8, Mayflower

EDWIN B. NEWMAN, Chairman

LUNCHEON FOR OLD AND NEW DIVISIONAL SECRETARIES

12:00-1:30 P.M., Friday, Cabinet Room, Mayflower

DIVISION OF GENERAL PSYCHOLOGY

SYMPOSIUM: CLINICAL PREDICTIONS
OF INDIVIDUAL ADJUSTMENT FROM
PERSONALITY TEST PROTOCOLS—
AN EXPERIMENTAL STUDY OF
AN AIR FORCE POPULATION1:40–3:40 P.M., Monday, Williamsburg Room,
Mayflower

(Co-sponsored with Division 12.)

ROBERT I. WATSON, Chairman

Participants:

SAUL B. SELLS. Description of the USAF School of Aviation Medicine research program on the development of psychiatric screening devices for selection of flying personnel. Relation of the present problem to the general program.

W. H. HOLTZMAN. Clinical assessment of selected test protocols: Experimental design, procedures, and major findings.

C. N. COFER. Clinical intuition in the process of judgment and the theoretical framework used by the clinician.

Z. A. PIOTROWSKI. The problem of latent personality characteristics in clinical predictions and the continuity of the personality through time.

SYMPOSIUM: COGNITIVE THEORY AND
PERSONALITY FUNCTIONING9:50–11:50 A.M., Tuesday, Presidential Room,
Statler

(Co-sponsored with Division 12. See Division 12's program.)

PRESIDENTIAL ADDRESS AND
BUSINESS MEETING

8:00 P.M., Tuesday, Pan-American Room, Mayflower

KARL M. DALLENBACH, Chairman

SAMUEL W. FERNBERGER. Some European Psychological Laboratories—1951.

SYMPOSIUM: CONCEPTUAL TRENDS

1:40–3:40 P.M., Wednesday, Ballroom, Mayflower

SAMUEL W. FERNBERGER, Chairman

Participants:

FRANCIS W. IRWIN. Motivation.

ROGER G. BARKER. Child psychology.

ROBERT M. GAGNÉ. Human skills.

MILTON E. HAHN. Counseling and guidance.

SYMPOSIUM: CLINICAL AND EXPERI-
MENTAL PSYCHOLOGY—THE AP-
PLICATION OF EXPERIMENTAL
METHODS TO CLINICAL
MATERIALS8:40–10:40 A.M., Thursday, Williamsburg Room,
Mayflower

Participants:

HANS-LUKAS TEUBER, Chairman. Controlled studies of therapeutic efficacy.

HALDOR ENGER ROSVOLD. The logic of electroshock and operative therapies: Experiments on animals and men.

D. O. HEBB. The assumptions of "psychosomatic medicine" and some contradictory evidence.

JOSEPHINE SEMMES. Sensory organization and disturbance in animals and men.

SYMPOSIUM: RECENT ADVANCES IN
THE PSYCHOPHYSIOLOGY OF
THE AUTONOMIC NERVOUS
SYSTEM2:40–4:40 P.M., Thursday, Williamsburg Room,
Mayflower

Participants:

JOHN I. LACEY, Chairman. Some problems in the measurement and interpretation of somatic responses.

ROBERT B. MALMO. The problem of symptom mechanisms in psychiatric patients.

CHESTER W. DARROW. Autonomic-cortical relationships.

ELIZABETH DUFFY. Degree of activation: Its nature and significance.

M. A. WENGER. Critical discussion.

GENERAL PSYCHOLOGY I

8:40–9:40 A.M., Friday, Chinese Room, Mayflower

ROBERT LEEPER, Chairman

8:40 A.M. Reciprocal fostering of two inbred mouse strains and its effect on the modification of inherited aggressive behavior. EMIL FREDERICSON, Roscoe B. Jackson Memorial Laboratory.

PROBLEM: An experimental test of the hypothesis that the personality of the parent can be transmitted through social interaction with the offspring.

SUBJECTS: A total of 103 mice, representing two highly inbred strains, were used. Of this total, 43 animals were of the strain C57BL/10Jax (highly ag-

gressive in competition over food), and 60 animals of the strain BALB/cScJax (noncompetitive). Males and females were equally represented.

PROCEDURE: C57 and C mice were reciprocally fostered at birth. When a given litter attained the age of 30 days after birth, tests were given investigating the effects of the foster parent upon the aggressiveness of the foster offspring. The testing technique involved the elicitation of competitive fighting over food, both under conditions of previous 24-hour food deprivation and when not deprived. Control studies on the behavior of young mice with respect to their natural parents were also performed.

RESULTS: It was found that the highly competitive behavior of the C57BL young ($N = 33$) was not modified in any discernible manner by the experience of having been raised in the presence of noncompetitive C Albino parents. It was observed that the C57 young would challenge their C Albino foster parents and cause them to adopt the C57 fighting pattern. C Albino mice ($N = 48$) raised by highly competitive C57 parents retained their noncompetitive pattern of behavior.

CONCLUSIONS: The obtained results suggest that the transmission of aggressive and nonaggressive behavior from parent to offspring, in mice, is determined by hereditary rather than social-environmental variables. No generalization of these findings can at present be attempted.

The experiment was performed with the assistance of Nancy Gurney.

This investigation was supported by a research grant from the National Institute of Mental Health, U. S. Public Health Service.

8:55 A.M. Interocular transfer of a visual motor task in normally reared and "hood-reared" ring doves. ARTHUR I. SIEGEL, *New York University*.

PROBLEM: Interocular transfer interests psychologists because this phenomenon bears upon theories of cerebral function. The bird is an adequate animal within which to study this transfer owing to the lack of known connections between each eye and the ipsilateral optic tectum. Interocular transfer in birds deprived throughout life of visual form definition would confirm theories of the "field" variety, e.g., Lashley, Köhler. Lack of transfer by these birds would confirm theories which postulate that transfer takes place via hypothetical intracerebral pathways which are dependent for their development upon past experience, e.g., Hebb.

SUBJECTS: 24 "hood-reared" ring doves; 12 controls. **PROCEDURE:** Prior to the opening of their eyes, the experimental doves were hooded with a plastic, trans-

lucent, nonselective headress which allowed their retinæ to be stimulated by brightness differences, but which prevented visual form definition. After preliminary training to jump from a perch to the horizontal, a hole was cut in their hoods so that vision mediated by one upper hemiretina was possible. Using a modified Lashley jumping apparatus, the birds were then trained on a circle-triangle discrimination. On reaching the criterion, the eye used in training was covered, and test for transfer to the contralateral eye made. Using this method, tests for transfer were made from the right to the left eye, from the left to the right eye, and from the right to both eyes. The procedure, aside from the manner of rearing, was identical for the controls.

RESULTS: The normally reared doves showed immediate transfer. The doves reared without specific visual form definition did not show immediate (100%) transfer. They did, however, demonstrate some transfer. More transfer was shown from a single eye to both eyes functioning simultaneously than from a single to a contralateral eye.

9:10 A.M. An experimental study of configurational dynamics. HEINZ WERNER and SEYMOUR WAFNER, *Clark University*.

PROBLEM: This study deals with those dynamic characteristics of perception which have been variously called "demand qualities," "physiognomic qualities," etc. For example, people experience in a right (left) profile of a face a dynamic directional quality to the right (left). These phenomenological descriptions require experimental test. It is hypothesized that under appropriate conditions figures with a left-directional dynamics will be perceived relatively more to the left than figures with right-directional dynamics.

PROCEDURE: In a darkroom, luminescent rectangles, triangles (apex left and right), face profiles (left and right) were placed in the fronto-parallel plane so that the fixated left (right) edge was directly in front of S (objective median plane). S 's task was to move the figure so that it appeared straight ahead, i.e., in the apparent median plane. Forty S s were tested under 10 experimental conditions.

RESULTS AND CONCLUSIONS: The hypothesis was verified. Statistically significant shifts of the position of the figure—indicated by the position of the apparent median plane—were obtained. The direction of shift was found to be a function of the directional dynamics of the test figure.

These findings are interpreted in terms of object-body relations within the sensory-tonic field theory of perception. (Slides)

9:25 A.M. An interpretation of the development of perceptual set in S-R terms. DELOS D. WICKENS, *The Ohio State University*.

This paper is an attempt to handle in S-R terms the type of perceptual phenomena illustrated in the experimental studies on the acquired distinctiveness of cues, wherein the subject develops response biases toward or against certain classes or dimensions of stimuli.

A typical experiment illustrating this phenomenon is one in which the subject learns responses to stimuli in a situation wherein one class of stimuli is relevant for problem solution and another class is irrelevant. Later the subjects may learn a new problem with the previously irrelevant stimulus now relevant. Negative transfer effects may be found.

Using the concepts of continuity learning, stimulus generalization of both excitatory and inhibitory potentials, and response generalization, a typical problem is analyzed in S-R terms.

This analysis generates a number of predictions. Some of these predictions conform with known experimental results. In other cases predictions are made which could readily be put to experimental test. (Slides)

GENERAL PSYCHOLOGY II

9:50-10:50 A.M., Friday, Chinese Room, Mayflower

KARL M. DALLENBACH, Chairman

9:50 A.M. Dark adaptation and apparent motion.

E. P. HORNE and R. T. SAUCER, *University of Florida*. (Sponsor, E. P. Horne)

PROBLEM: The determination of the dependency of apparent motion, i.e., beta movement, upon the degree of dark adaptation has been explored.

SUBJECTS: 20 college students, naive as to the problem.

PROCEDURE: After different intervals of dark adaptation the subjects were asked to observe beta movement. A preliminary training trial was given each subject three weeks before the experiment began. Five levels of adaptation were established by remaining in the completely dark room for 0, 5, 10, 15, and 30 minutes. Flash rates were 2 and 4 per sec. The intensity of stimulation was at a brightness of .505 millilambert. Optimal beta motion was measured for duration and frequency over a period of five minutes. Recording was done on a constant speed polygraph. The subject pressed the key when beta was observed and released key when it disappeared.

RESULTS: Analysis of variance and *t* tests show that mean length of beta movement is a function of dark adaptation time. The number of reversals from beta

to loss of beta motion increased significantly from 0 to 10 min. of dark adaptation. Comparisons between 0 and 15 min. and 0 and 30 min. were also significant. CONCLUSIONS: Degree of dark adaptation influences the perception of beta movement.

10:05 A.M. Familiarity, emotionality, and retinal dominance. JEROME COHEN, *Antioch College*.

PROBLEM: To determine whether familiarity and emotionality of verbal stimulus materials are variables affecting retinal dominance in the retinal rivalry situation.

SUBJECTS: 47 undergraduate psychology students.

PROCEDURE: The experimental method was stereoscopic projection of two words on equivalent retinal areas of the two eyes. This resulted in retinal rivalry, first one and then the other word occupying the visual field. Two similar experiments were performed: (a) In the first, five three-letter words from Thorndike's list of 500 most familiar words, and five three-letter nonsense syllables were the stimulus materials. (b) In the second, two emotionally threatening words were paired with two neutral words. In each study, both pairs of stimuli were composed of the same letters so were of equivalent physical stimulus characteristics.

Each subject was given two stimulus pairs. To control for eye dominance, each pair was presented twice; on the second presentation, the word first shown to the left eye was shown to the right, and vice versa. The main experimental measure was the total time in a two-minute exposure interval that each of the two competing stimuli was seen.

RESULTS: An analysis of variance performed on the data resulted in insignificant *F* ratios for the variance due to the stimulus materials, the two eyes, and the orders of presentation. Nonsense syllables were no less dominant than familiar words in the retinal rivalry experiment. The emotionality of the stimulus words also had no measurable effect on dominance, since the neutral words were seen a nonsignificantly different portion of the exposure time than the emotional words.

CONCLUSIONS: These negative results have implications for theories of social perception. We conclude that dominance in retinal rivalry is stimulus bound so that it is unaffected by the so-called directive factors. (Slides)

10:20 A.M. The "autistic" effect of punishment on figure-ground perception. DONALD E. SMITH and JULIAN E. HOCHBERG, *Cornell University*. (Sponsor, Julian E. Hochberg)

PROBLEM: Schafer and Murphy reported that previous monetary gain and loss partly determined the percep-

tion of figure in an ambiguous figure-ground situation. Such results would apparently involve pre-perceptual recognition; however, Rock and Fleck failed to support them (although rewards may not have been motivationally comparable) and Wallach suggests that the outline figures used permitted recognitions of "line" rather than figural form, so that solid figures should have been used. The present problem is whether with electric shock as punishment, rather than questionable monetary rewards, "perceptual defence" can be obtained with solid figures.

SUBJECTS: 10 introductory psychology students.

PROCEDURE: Two solid white (B, D), and two black (A, C) half-moon "faces" (A and B can mesh at the profile to form a full circle, as do C and D) were exposed on gray ground ($\frac{1}{8}$ sec.). Each "face" appeared 15 times in the training series in which Ss learned its "name" as in previous studies; five Ss were shocked simultaneously with A and with D, the other five with faces B and C. In a test series of 16, $\frac{1}{8}$ -sec. presentations of each full circle (A-plus-B, C-plus-D) forming a reversible figure, with interposed presentations of extraneous "set-breaking" figures, subjects reported which figure was perceived.

RESULTS: For the whole test series, shocked faces were reported less than unshocked ($.01 < p < .02$); results for A-plus-B, for C-plus-D, and for the first 16 trials considered separately, are in the same direction. Analysis of errors does not suggest a naming readiness.

CONCLUSIONS: The "autism" found by Schafer and Murphy can be obtained using shock as punishment, and is not restricted to outline figures; theoretical significance is discussed.

10:35 A.M. An exploration of "emphasis" factors in theatrical stage composition. CAROL BARNES HOCHBERG, HERMAN M. HARVEY, and JULIAN E. HOCHBERG. *Cornell University*. (Sponsor, Julian E. Hochberg)

PROBLEM: Traditional to stage composition is the assumed efficacy of factors of repetition (line-up behind foremost figure), focus (diagonal line-up), and strength of area for the achievement of dramatic emphasis.

An experiment was performed to vary these factors systematically; controlled investigation of the conventional theatrical axioms might achieve not only applied prediction and control, but also provide additional opportunity for the exploration of complex perceptual and social phenomena.

SUBJECTS: 30 graduate and undergraduate students. **PROCEDURE:** A miniature stage 19 in. wide, 10 in. high, and 14 in. deep was viewed from 52 in. for a total of 16 2-sec. exposures per subject. Black, ra-

dially symmetrical, featureless, wooden "actors" 2 $\frac{1}{2}$ in. high were placed in patterns varying in number of "actors" and relative position. Presentation order was balanced. After each exposure, the subject indicated (a) location of the "star" of the dramatic action and (b) the apparent direction of the "actors'" gaze. **RESULTS AND CONCLUSIONS:** For the static conditions tested, no right-left differences were obtained; a slight superiority (not statistically significant) of down-stage over up-stage placement appeared. The effects of repetition and focus were statistically significant in all cases, as were emphasis shifts accompanying transitions between focus and repetition. The stage midpoint (the only stage area showing significant influence) yielded emphasis when a minimum number of "actors" were on stage. Intensive individual investigations support the general conclusion that, under these conditions, configuration of composition and *not* stage area per se is the primary influence in dramatic emphasis.

GENERAL PSYCHOLOGY III

11:00-12:00 M., Friday, Chinese Room, Mayflower

CARL N. REXROAD, Chairman

11:00 A.M. Pictorial representations of some adjustment problems and techniques. KEY L. BARKLEY, *North Carolina State College*.

PROBLEM: To present, by use of lantern slides, artists' pictorial interpretations of some adjustment problems and techniques.

MATERIALS AND PROCEDURE: Artists of all ages have sought to portray man's adjustment to his world. The rise of psychology, with its many new concepts of man's nature and his techniques of adjusting, has created a vast new world of subjects for the artists. Psychoanalysis made a particularly rich contribution, and has furnished the cartoonist the materials for a thousand jibes:

Within recent years, an American and an European psychiatrist have been both artists and physicians. The American made pen sketches to show the appearance and the experiences of certain patients. Schizophrenia, general paresis, delirium tremens, melancholia, paranoia, and senile dementia are all sketched in delicate detail. The European psychiatrist presented her patients in oil paintings. By both design and color she sought to portray patients suffering delusions, hallucinations, despair, isolation, and sanctity. Her subjects were schizophrenic and parietic patients in an European hospital.

Dali, the surrealist, has been interested especially in presenting interpretations of the dream world. Frustration, escape, wish fulfillment, anxiety and fear,

disintegration, and remorse are portrayed in his highly symbolic manner.

Cartoonists have been prolific in their attempts to portray adjustment problems and techniques in their drawings. Their works will be illustrated here by representations of emotional facilitation, rationalization, and fear.

CONCLUSIONS: 1. The materials presented in this report are useful means of showing the nature of the adjustment problems and techniques as interpreted by artists.

2. Some of the pictures may be used to study students' ability to identify the adjustment problems and techniques from observation of the artists' interpretations.

3. The pictures furnish illustrative materials for a nontechnical lecture on adjustment problems and techniques.

4. These artists' creations may serve as useful devices for creating further interest in the study of psychology. (Slides)

11:15 A.M. Failures of television advertising to communicate: the use of qualitative content analysis of audience response to evaluate the effectiveness of television commercials. JOSEPH C. FRANKLIN, *Kenyon Research Company*.

The problem was to identify the types and combinations of types, methods of commercial presentation, and methods of product presentation of television commercials as they affect the efficiency of advertisers' communications with viewers.

Trained interviewers conducted approximately hour-long qualitative interviews with one hundred women and fifty men, fairly representative viewers. Interviews were tape-recorded for subsequent content analysis.

Informal questioning (but providing comparable coverage of material) investigated each respondent's history and general habits of viewing, degree of involvement, program selectivity, level of interest, amount of time devoted to viewing. Specific and type program likes and dislikes and program loyalty were ascertained.

Respondents discussed in detail their subjective experience with television commercials. Information was elicited which would reveal the goals, values, and interests which influence respondents' perceptions of television commercials and alterations in them through time related to exposure to television commercials.

In the foregoing terms the anatomy of commercials was examined with reference to attention, continued favorable attention, comprehension, feelings and emotional responses, and effects on purchasing behavior.

Content analysis identified the characteristics of the viewers' goals, values, and interests which structured their perceptions of, and, therefore, the resultant influence on their behavior of television commercials. Program and commercial interactions were also studied.

Successful communication was defined as that which could be recalled, that which was recalled favorably, and that which positively motivated the viewers in terms of buying decisions. According to this definition, the collation of content analysis results of individual respondents produced some common patterns clearly indicating strengths and weaknesses in the anatomy of television commercials as communicators. These will be discussed and specifically related to the various typical elements of the content of television commercials for a number of product classes.

11:30 A.M. The prevalence of modern "superstitions" concerning psychology and psychiatry: a preliminary report. EUGENE E. LEVITT, *Cleveland Heights, Ohio*.

This paper is based on the writer's earlier work (*Amer. Psychologist*, 1951, 6, 260) in which it was demonstrated that the mystical superstitions of 1925 are largely extinct today. It was hypothesized at that time that a new set of misconceptions has arisen and replaced the antiquated ones. Psychiatry and psychology were offered as potential subjects for these modern "superstitions."

The present preliminary report shows the results of a survey of thirty contemporary misconceptions of which twenty-four are concerned directly or indirectly with psychiatry, psychology, and psychoanalysis. The subjects were 94 middle- and upper-class nonprofessionals with a mean educational level of 13.06 years, and a mean age of 36.0 years.

It was found that the mean number of misconceptions per subject was 9.61. The median percent of credence per item was 32. Nineteen of the misconceptions were accepted by 20% or more of the subjects.

"Superstitions" concerning hypnosis, the nature of schizophrenia, the prevalence of neurosis, the relationship between blindness and audition, and the existence of a truth serum are most widespread.

Correlations between number of misconceptions believed and educational level was $-.02$, between number of misconceptions and age, $.20$. The meaning of the correlations is discussed.

The findings in general parallel those obtained by Nixon in 1925 using the set of superstitions currently outmoded. This similarity is taken to mean that people in general have not become less super-

stitious, but that superstitions themselves come and go.

A theoretical view of the frame of reference in which superstitions are held and an hypothesis as to the nature of the "superstition-prone" individual are advanced.

11:45 A.M. Decline in ESP success as evidence of inhibitory position factor. J. G. PRATT, *Duke University*.

An extensive series of 50,000 trials in an ESP test carried out under controlled experimental conditions were made with a single subject between 1945-50 by S. G. Soal and his collaborators. In most of these tests the subject's response on each trial was limited to a range of five possible choices with a $\frac{1}{5}$ probability of scoring a hit. These records have been analyzed to see how the subject's hits were distributed within the sets of 50 responses recorded on a single record sheet (two columns of 25 trials each). A criterion sample of 50 sheets taken from near the middle of the series showed the main position effect to be a decline in scoring in the first column on the page. The difference between the first 10 trials and last 10 trials gave a critical ratio of 5.22. This effect was verified upon 600 additional pages of data extending throughout the five-year period of the experiment; the decline within the first column on the page in this test sample had a critical ratio of 10.50. When this decline effect was evaluated in terms of the empirical variance to see whether there was a significant difference in the ESP success itself, a Student's t of 9.50 was found ($df > 30$).

This significant falling off in scoring within the subunit of the test was examined for possible psychological factors contributing to the inhibition of the capacity present at the start of the set. An hypothesis of configurational nature is offered to account for the results, one for which there is other supporting evidence both from sensory and from extrasensory perception.

SYMPOSIUM: THE DEVELOPMENTAL VIEWPOINT IN PERCEPTION

9:50-11:50 A.M., Saturday, Congressional Room, Statler

Participants:

HEINZ WERNER, Chairman. The status of genetic perception psychology.

JAN BRUELL. Experimental studies of temporally extended perceptual processes and the concept of *Aktualgenese*.

JAMES L. FRAMO. A tachistoscopic study of perceptual development in normal adults.

LESLIE PHILLIPS. Perceptual processes and development in normal children and adults, and in psychiatric patients.

SYMPOSIUM: THE TEACHING OF EXPERIMENTAL PSYCHOLOGY

9:50-11:50 A.M., Saturday, Chinese Room, Mayflower

(Co-sponsored with Division 2. See Division 2's program.)

DIVISION ON THE TEACHING OF PSYCHOLOGY

RESEARCH IN THE TEACHING OF PSYCHOLOGY

8:40-9:40 A.M., Monday, North Room, Mayflower

CLAUDE E. BUXTON, Chairman

8:40 A.M. The relation of student achievement indices of teaching effectiveness and student rating of introductory psychology instructors. HAROLD E. RUSSELL and A. W. BENDIG, *U. S. Army Hospital, Camp Pickett, Virginia, and the University of Pittsburgh*.

PROBLEM: Barr has pointed out that one area of needed research in measuring teaching effectiveness is the investigation of the interrelationships among different approaches to evaluating instructor adequacy. Two of the more commonly used approaches are by means of student rating of instructors and

by comparing the achievement levels of the students of different instructors. This study was designed to discover whether students' ratings of instructors are related to student achievement when the academic aptitude of the students is statistically controlled.

PROCEDURE: A regression equation for predicting introductory psychology course grades from ACE Q and L percentile scores was developed from the data of 1103 students. This equation was used to predict individual grades for a new sample of 231 students taught by five instructors. Rating scale evaluations of their instructors were collected from the students at the end of the semester on the 14 scales of the Miami University Instructor Rating Sheet. Mean ratings of the instructors on each scale were correlated (ρ) with (a) the ratio for each instructor of the number of his students exceeding their pre-

dicted grade (plus) to the number achieving a grade lower than that predicted (minus), and (b) the algebraic mean of the differences between predicted and obtained grades of each instructor's students. All course grading was done on a departmental basis and allowed little individual instructor bias.

RESULTS: Only one of 28 correlations computed was significant at the .05 level; a correlation of 0.89 between ratios of "plus" and "minus" students and Miami Scale 13 (Contribution of Textbook to Course). Average of all 28 correlations was 0.16. Multiple correlation of ACE scores and course grades was 0.47.

CONCLUSIONS: Only a slight positive relationship was found between student achievement indices of teaching effectiveness in introductory psychology and student rating of instructors. It is suggested that this result is attributable to academic aptitude having been controlled in this study.

8:55 A.M. Some factors which may be associated with student choice between directive and non-directive classes. MABLE ASHMUS and GERARD HAIGH, *Springfield College*. (Sponsor, Gerard Haigh)

PROBLEM: To investigate some of the factors which may be associated with students choosing between a directive and a nondirective type of classroom experience. The factors studied include intelligence, academic achievement, major field in college, extent of previous experience with both directive and non-directive leadership and the student's perception of each of these class types.

SUBJECTS: 160 students enrolled in three sections of a required course in child psychology during the winter quarter of 1952 at Springfield College.

PROCEDURE: On the first day of class, students were presented with a choice between a directive and a nondirective type of class, each of which was offered concurrently. In the process of making this choice, they were asked to respond to a questionnaire which called for the following: (a) advantages and disadvantages seen in each type of class, (b) extent of previous experience with each, (c) degree of directiveness perceived to characterize the preceding course in psychology (which all students had had and which was taught by the same instructors), (d) degree of satisfaction with the preceding course.

Eighty-one students chose a directive class and seventy-nine chose a nondirective class, forming the two groups studied.

Data were then secured from the college registrar with respect to current academic index, percentile ranking on the ACE Psychological Examination

taken one year previously and major field. The major fields represented include physical education, teacher education, and group work.

RESULTS: Results will be presented to show which of these factors significantly differentiate the students who chose a directive class from those who chose a nondirective class.

9:10 A.M. The effects of the use of "participative action" groups in a course in general psychology.

LORRAINE M. GIBB and JACK R. GIBB, *University of Colorado*. (Sponsor, Jack R. Gibb)

PROBLEM: To determine the effects of the use of "participative action" as a teaching device in the first course in general psychology.

SUBJECTS: 912 students in general psychology, comprising 11 sections ranging in size from 72 to 98.

PROCEDURE: Eleven sections of a general psychology class were roughly equivalent in sex, age, college-major composition, and expectation as to teaching method. The sections met three days per week for 33 weeks. Ten of the sections were taught by traditional lecture-discussion methods. The eleventh section was taught by "participative action" methods developed and tested in our group dynamics laboratory. No formal lectures on course content were given. As a background for group discussions the students were required to read two standard texts, selected articles, and one "psychological novel." The class activities were centered around several subgrouping methods designed to increase effective group participation. The instructor, who played a constantly diminishing role in the decisions and activities of the groups, gave training in role playing, group goal setting, problem centering, distributive leadership, evaluation of individual performance by intragroup ratings, process observing, group selection, evaluation, and revision of class activities. Groups were given continual knowledge of results of ratings and class evaluations.

RESULTS AND CONCLUSIONS: Several pre- and post-experiment measurements were made on (a) the experimental group and (b) one randomly-selected control group. Some measures were made on the entire group of 912 students. The experimental group made statistically significant gains in role flexibility, self-insight, leadership and likeability ratings, and group-membership skills. These gains were made with no apparent loss of normal content acquisition, as measured by traditional objective and essay examinations.

9:25 A.M. An experimental study of attitudes and achievement in the democratic classroom. HENRY CLAY SMITH and DONALD JOHNSON, *Michigan State College*.

PROBLEM: How do students evaluate the democratic method and what is its effect on achievement and attitudes?

SUBJECTS: 64 representative students in a general psychology class were picked by a democratic attitude scale and an achievement test. They were divided into four matched groups of sixteen each.

PROCEDURES: Two of the groups were taught by the democratic and two by the lecture method. The democratic attitude scale and achievement test were given at the beginning and end of the course. Records of participation and sociometric ratings were obtained. The students evaluated the interest, significance, and other aspects of the course on a rating form.

RESULTS: Over all, class evaluations were more favorable and achievement greater in the democratic classes. However, one democratic group was somewhat less favorable and one significantly more favorable in their evaluations compared to their control groups in the lecture classes. The ten students with the most favorable evaluations in both democratic groups, compared with the ten with the least favorable evaluations, were more democratic in their attitudes, participated more, were more frequently chosen as work associates, but did not obtain as high scores on the final achievement test.

CONCLUSIONS: The two democratic groups had slightly higher academic achievement in spite of wide deviations from normal classroom procedures. Evaluations of the democratic classes were influenced more by the democratic attitudes, aggressiveness, and acceptance of the student than by academic achievement. Recommendations regarding the selection of students, incentives, and procedures for increasing the effectiveness of the democratic class will be presented.

SYMPOSIUM: NEW APPROACHES TO THE FIRST COURSE IN PSYCHOLOGY

9:50-11:50 A.M., Monday, North Room, Mayflower

WILBERT J. McKEACHIE, Chairman

Participants:

HARRY W. KARN and B. VON HALLER GILMER. A basic psychology course for engineering students.

RALPH F. HEFFERLINE. Report on the Columbia College Program in Psychology.

F. K. BERRIEN. A case history approach.

JACK R. GIBB. The "participative action" group in the first course in psychology.

R. B. MACLEOD. A reactionary's last ditch stand.

PRESIDENTIAL ADDRESS AND BUSINESS MEETING

4:00-6:00 P.M., Monday, Pan-American Room,
Mayflower

CLAUDE E. BUXTON. Unfinished Business.

SYMPOSIUM: STUDENT-CENTERED VS. INSTRUCTOR-CENTERED COLLEGE INSTRUCTION

8:40-10:40 A.M., Tuesday, Williamsburg Room,
Mayflower

(Co-sponsored with Division 15. See Division 15's program.)

SYMPOSIUM: PROBLEMS IN DOCTORAL EDUCATION

1:40-3:40 P.M., Wednesday, Congressional Room,
Staller

E. LOWELL KELLY, Chairman

Participants:

BRUCE V. MOORE. The basic doctoral program in psychology.

VICTOR C. RAIMY. Preparation within the doctoral program for service as clinical psychologist.

C. GILBERT WRENN. Preparation within the doctoral program for service as counseling psychologist.

RAYMOND A. KATZELL. Preparation within the doctoral program for service as industrial psychologist.

RICHARD S. CRUTCHFIELD. Preparation within the doctoral program for service as social psychologist.

HAROLD SCHLOSBERG. Preparation within the doctoral program for teaching and research in psychology.

GROUP DISCUSSION*: NEEDED RE- SEARCH IN THE TEACHING OF PSYCHOLOGY

8:40-10:40 A.M., Thursday, Jefferson Room,
Mayflower

C. R. CARPENTER, Chairman

Discussants: EVERETT W. BOVARD, B. VON HALLER GILMER, RICHARD HUSBAND, WILBERT J. McKEACHIE, WILBERT S. RAY, and CLARENCE W. YOUNG

*These informal group discussions are organized around more specific problems than are the symposia. While each group will include several prepared participants, it is not intended that discussion should be limited to them.

**GROUP DISCUSSION: WHAT SHOULD BE
THE CONTENT OF PSYCHOLOGY
COURSES FOR MEDICAL
STUDENTS?**

*11:00-1:00 P.M., Thursday, Jefferson Room,
Mayflower*

LOUIS D. COHEN, Chairman

Discussants: DONALD B. LINDSLEY, IVAN N. MENSCH,
and G. K. YACORZYNSKI

**GROUP DISCUSSION: HOW CAN DOCT-
ORAL CANDIDATES BE TRAINED
IN THEORY CONSTRUCTION
IN PSYCHOLOGY?**

1:40-3:40 P.M., Thursday, Room 260, Mayflower

SIGMUND KOCH, Chairman

Discussants: WILLIAM K. ESTES, DONALD O. HEBB,
LYLE H. LANIER, and KENNETH W. SPENCE

**GROUP DISCUSSION: PROVIDING PRACTICUM
TRAINING FOR TEACHERS
OF PSYCHOLOGY**

*4:00-5:00 P.M., Thursday, Jefferson Room,
Mayflower*

WILSE B. WEBB, Chairman

**GROUP DISCUSSION: TEACHING AIDS
FOR PSYCHOLOGY COURSES**

8:40-10:40 A.M., Friday, Jefferson Room, Mayflower

ELIZABETH B. HURLOCK, Chairman

Discussants: EMILY M. F. COOPER, HERBERT SORENSON,
and RICHARD P. YOUTZ

**GROUP DISCUSSION: THE INITIATION
OF A JOURNAL ON THE TEACHING
OF PSYCHOLOGY**

11:00-1:00 P.M., Friday, Jefferson Room, Mayflower

HOWARD G. MILLER, Chairman

Discussant: ROBERT H. KNAPP

**SYMPOSIUM: TEACHING OF
INTRODUCTORY SOCIAL
PSYCHOLOGY**

1:40-3:40 P.M., Friday, Chinese Room, Mayflower

(Co-sponsored with Division 9. See Division 9's
program.)

**SYMPOSIUM: THE TEACHING OF
EXPERIMENTAL PSYCHOLOGY**

*9:50-11:50 A.M., Saturday, Chinese Room,
Mayflower*

(Co-sponsored with Division 1.)

DONALD M. JOHNSON, Chairman

Participants:

IRWIN A. BERG. Clinical needs and experimental
training.

B. RICHARD BUGELSKI. The place of experimental
psychology in the curriculum.

RICHARD H. HENNEMAN. Training in experimental
psychology for human engineering research.

DONALD W. MACKINNON. Experimental psychody-
namics.

FRED D. SHEFFIELD. Basic training in experimental
psychology.

DIVISION OF EXPERIMENTAL PSYCHOLOGY

MOTIVATION I

8:40-9:40 A.M., Monday, East Room, Mayflower

GREGORY A. KIMBLE, Chairman

8:40 A.M. The effect of the hunger and thirst drives
upon exploratory behavior. K. C. MONTGOMERY,
Cornell University.

PROBLEM: Is the amount or the orderliness of ex-
ploratory behavior affected by the hunger or the
thirst drive?

SUBJECTS: 24 female rats of the Wistar strain, about
100 days old. 8 Ss were assigned at random to each

of three groups, a hunger group (M), a thirst group
(T), and a control group (C).

PROCEDURE: On days 1 through 7 Group H was placed
on a 7-gm. maintenance diet, Group T was given 1 hr.
of water per day, and Group C was allowed free ac-
cess to both food and water. On day 5 all Ss were per-
mitted to explore freely, for 5 min., a symmetrical,
enclosed Y-maze constructed from 24-in. arms. On
day 6 and on day 7 the rats were exposed to the maze
for 10 min. The number of 12-in. sections explored
per minute and the order of section explorations were
recorded for each S on each day.

RESULTS: (a) Groups H and T do not differ in amount of exploratory behavior. Group C, however, exhibits a significantly *greater* amount of exploratory behavior (.01 level) over the three days of maze-exposure than either of the other groups. (b) There are no differences among groups in orderliness of exploratory behavior: on the average, over the three-day exposure period, each group entered three *different* maze-arms consecutively 68% of the time, a value significantly greater than chance (.001 level). **CONCLUSIONS:** The hunger and thirst drives tend to decrease amount of exploratory behavior, but do not influence its order characteristics. The theoretical significance of this conclusion is discussed. (Slides)

8:55 A.M. Running wheel activity and water deprivation. WILLIAM S. VERPLANCK, *Harvard University*.

PROBLEM: To investigate the relationships between certain conditions of food and water deprivation and running wheel activity.

SUBJECTS: 32 albino rats (16 Hisaws and 16 Wistars).

PROCEDURE: Four groups of four Hisaw albinos each were employed. The animals were housed in the living compartments of Wahman activity wheels which were set up in a humidity and temperature stabilized room on a 12-hr. light-dark cycle. All animals were admitted into the activity wheels for one hour at the same time of day on each of 20 consecutive days, and the number of revolutions turned daily during this hour was measured. On each day, the period of activity was followed by one hour of free eating and drinking, at the end of which all uneaten food was removed. On the following day, during the hour immediately before the activity period, the four groups received differential treatment, as follows: Group W—access to water, no food; Group O—no water, no food; Group FW—access to both water and food; Group F—access to food, no water. The experiment was then repeated on four groups of four Wistar albino rats.

RESULTS: The number of revolutions made daily increased over the full 20-day period for three of the four groups. The average number of turns per day over the 20 days was as follows: Group W—200; Group O—309; Group FW—70; Group F—200. The same relationships held throughout the 20 days of the experiment. In the repetition of the experiment, which was run in order to verify these results on a much more active and commonly used strain of experimental animal, these relationships were again found, but the mean number of revolutions was considerably greater. [Preceding work has shown that Group F animals are thirsty; i.e., if they had had access to *water*, instead of an activity wheel, during

the hour after differential treatment, they would have drunk a relatively large quantity of water.] It may now be concluded that the state of "thirst" produced by feeding previously food-deprived rats is correlated with a very low level of running activity, but that one hour of water deprivation increases significantly the level of running activity of food-deprived rats. Strain differences are emphasized. (Slides)

9:10 A.M. The effects of stomach distension on the hunger drive in the albino rat. NEAL E. MILLER and MARION L. KESSEN, *Yale University*.

PROBLEM: Previous studies show that milk injected directly into the stomach produces a prompt reduction in hunger. In these studies an injection of isotonic saline was a control for the volume of milk injected but not for the amount of stomach distension produced. This is because saline leaves the stomach faster than milk. The purpose of the present study was to isolate the effects of stomach distension by inflating a balloon inside of the stomach.

SUBJECTS: 6 albino rats with plastic fistulas and balloons in their stomachs.

PROCEDURE: Hungry rats were trained to press a bar to secure a drop of enriched milk. After overlearning, the bar-pressing was reinforced only at 3-min. intervals. Then two plastic fistulas were sewn into the stomach of each rat, one for the injection of milk and the other terminating in a rubber balloon which could be inflated with air. After postoperative recovery and retraining, the effects of the following treatments were tested: (a) 14 cc. of milk injected directly into the stomach, (b) 14 cc. of air injected into the stomach balloon and remaining there throughout the test trial, and (c) a control with no injection of milk or air. Immediately after these treatments the rate of bar-pressing, periodically reinforced by milk, was measured for a period of 30 minutes. Each animal was given all of the treatments; the sequence was balanced.

RESULTS: Inflation of the stomach balloon produced a decrement in rate of response; injection of milk produced a still greater decrement. The effects of both of these treatments (compared with the control) were statistically reliable but the difference between them was not.

CONCLUSION: Moderate stomach distension can reduce, or interfere with, hunger. (Slides)

9:25 A.M. Reinforcement of a habit by intravenous injection of glucose after each response. HAROLD COPPOCK, *University of Oklahoma*.

PROBLEM: Can the probability of a head position of a hungry rat be increased by accompanying this position with continuous injection of glucose? Will di-

rect reduction of caloric tissue-need reinforce a habit in the absence of the usual secondary reinforcements accompanying consummatory responses of chewing, swallowing, and digesting?

SUBJECTS: 32 male albino rats, 240 to 460 grams each.
PROCEDURE: Following deprivation of food for 3 days, each rat was restrained in a snugly-fitting cage, with head and tail protruding. Under local anesthetic, the caudal vein was exposed at base of tail. A 23-gauge needle was inserted proximally and sutured in place. Rat was then placed with head between vertical beams of infrared light so that horizontal flexion of head to either side actuated the photoelectric relay on that side.

Responses were recorded for 10 min. One photo-relay was then connected to an electromagnetic valve controlling flow of fluid from a reservoir four feet above needle. During the next 90 minutes, fluid could flow through valve and into blood system of rat as long as head was turned toward nonpreferred side.

Sixteen rats were "reinforced" by 10% dextrose in physiological saline and sixteen by saline.

RESULTS: Relative to the saline group, the glucose group showed progressive increase in mean per cent preference for reinforced side. Group differences during the last 30 minutes were significant at .01 level.

CONCLUSIONS: Although results appear consistent with need-reduction theory of reinforcement they are believed to be more compatible with results of other experiments in this series if need-reduction and elicitation of (consummatory?) responses are considered two special cases of S-R contiguity learning. Further comparison of the reinforcing effects of changes in internal environment and changes in external environment awaits investigation of the role of gustatory and alimentary effects of glucose injection. (Slides)

SENSORY I

8:40-9:40 A.M., Monday, Pan-American Room,
 Mayflower

CLARENCE H. GRAHAM, Chairman

8:40 A.M. Cerebral mechanisms in taste discrimination. R. M. BENJAMIN and C. PFAFFMANN,
 Brown University.

The region of the rat's cerebral cortex concerned in gustatory discrimination was located by the combined use of physiological and behavioral methods. The probable locus of such a region was determined from the evoked cortical potentials elicited by electrical stimulation of the chorda tympani and glossopharyngeal nerves. The area giving rise to these potentials was located on the posterior orbital surface

just above the rhinal fissure and measured approximately 2×3 mm. in size. Changes in the aversion thresholds for quinine solutions were studied after ablating this region. The two-bottle choice method with varying concentrations of quinine solutions was employed. Of 14 experimental animals, 11 showed postoperative elevation of thresholds varying from 3.5 to 273 times. In all but 3 cases the aversion thresholds returned to preoperative levels after a period of three months. Of 9 control animals with lesions of varying size in other cortical areas, only 2 showed elevation of threshold, 2 and 2.5 times respectively. Two of these control animals suffered almost complete bilateral removal of the cortex except for the presumed taste area. Three of 8 control animals with no cortical ablation showed an elevation of thresholds on retest of 2, 2, and 11.5 times respectively. Histological reconstructions of the brains for all animals are being carried out but are not yet completed. The evidence indicates that the region to which the chorda tympani and the IX nerves project is concerned in the discrimination of taste solutions.

This research was supported by the Office of Naval Research, Project NR 140-721. (Slides)

8:55 A.M. The stimulus for vibratory and repeated tactile intensity. CHARLES R. PORTER, *Yale University*. (Sponsor, Lloyd H. Beck)

PROBLEM: This study attempted to find whether the amplitude, velocity, acceleration, force, impulse, work, action, or power developed across an area of skin in contact with a mechanical oscillator was highly correlated with vibratory and repeated tactile intensity in man.

SUBJECTS: 4 trained subjects were used.

PROCEDURE: The stimulator was a steel stylus rigidly attached to the armature of a commercial vibration generator which produced forces up to fifty pounds and amplitudes up to $\frac{1}{4}$ in. The stylus protruded through a circular hole in a steel plate, over which the subject placed his left index finger; thus the area stimulated formed a clamped circular membrane. The motion of the stylus was continuously monitored by a seismic-type velocity pickup, from whose voltage output the other physical dimensions of skin motion could be computed.

The subjects compared the sensation intensity associated with a given velocity at one frequency to the sensation intensity associated with another velocity at a second frequency. The comparisons, made in terms of fractionation, bisection, and equation procedures, involved thirteen frequencies between two and 1,000 cycles per second. Extraneous cues were eliminated by means of blindfolds, white noise, and vibration isolation.

RESULTS AND CONCLUSIONS: The psychophysical scales, based on approximately 34,000 comparisons by the four subjects, were in good agreement. The data indicated that for frequencies between two and 300 cps the mechanical dimension of skin motion most highly correlated with vibratory and repeated tactile intensity was the force developed across the skin. A theory which accounted for the results at all frequencies between 2 and 1,000 cps postulated that the stimulus was the force developed across two sets of receptors of differing mechanical impedance. Identity in the stimulus for vibratory and repeated tactile intensity suggested that touch and pallesthesia constitute a single modality. (Slides)

9:10 A.M. Angular displacements of the eye during prolonged fixation. L. A. RIGGS and J. C. ARMINGTON, *Brown University*.

PROBLEM: Visual acuity is usually measured under conditions of more or less prolonged exposure of the test object. Since the eye is never completely at rest, it becomes important to determine the relative importance of tremor and other involuntary movements upon the measured values of acuity. In the present experiments, involving improved and validated techniques of recording, the average extent of eye movements is determined for intervals of time during maintained fixation on a stationary test object.

METHOD: The subject wears a contact lens and attempts to fixate on a single point in the visual field. Light reflected from a plane mirror on the contact lens is used to produce a tracing on continuously moving photographic film. Such tracings provide an indication of eye movements occurring over an extended period.

RESULTS: The average extent of eye movement is plotted as a function of time interval. It is found that eye movements are of little practical importance for intervals of less than one msec. For longer intervals, there is increasing probability that the eye will move through specified angles. From these data it may be concluded that a considerable number of foveal cones are involved in normal fixation.

This research was conducted under Contract N7 onr-35802 between the Office of Naval Research and Brown University. (Slides)

9:25 A.M. Further determination of monocular movement parallax thresholds as a function of field size and speed of stimulus movements.

RICHARD T. ZEGERS, S.J., *Fordham University*.

Graham and his co-workers, together with Zegers, obtained experimental data pointing to a rise in the threshold values for monocular movement parallax as the rate of stimulus movement increased. In the

present work—using the same apparatus as previously reported, employing five trained subjects, a range of 15 rates of stimulus movements (from .28 to 34 degrees per second), and four sizes of viewing field (subtending visual angles from 3.58 to 14.96 degrees), no such rise in threshold values was found. The data have been submitted to analysis of variance and the effects of subjects' variability, field size, and rate of stimulus movement determined. These data are used as the basis for a reconciliation of the Graham and Zegers findings with the present work and for a further analysis of the various cues which are involved in the perception of depth by means of monocular movement parallax. Evidence has been obtained to support the listing of the following cues as important factors in this type of depth perception, (a) direct and immediate perception of depth, (b) relative motion between stimulus objects, (c) prior entrance into or exit from the field by one of the stimulus objects and (d) a peculiar type of apparent motion of the stimulus objects in the third dimension which seems related to the phenomenon of reversible figures.

MOTIVATION II

9:50-10:50 A.M., Monday, East Room, Mayflower

FRED D. SHEFFIELD, Chairman

9:50 A.M. The effect of regulating food intake on hunger following electroconvulsive shock in rats.

ALLAN F. MIRSKY and H. ENGER ROSVOLD, *Yale University*. (Sponsor, H. Enger Rosvold)

PROBLEM: What is the effect of electroconvulsive shock on hunger?

SUBJECTS: 22 male albino rats of the Sprague-Dawley strain who were approximately 160 days old at the time of shock.

PROCEDURE: The animals were divided randomly into two main groups. Group I consisted of eleven animals kept at 85% of weight, five of whom received ten electroconvulsive shocks. These rats received bar-pressing training for food on partial reinforcement. Bar-pressing scores as measures of hunger were obtained for all animals in five 20-min. tests preshock, four such tests during shock, and in ten tests postshock. The rats in group II ($N=11$) were allowed to feed ad lib. throughout the course of the experiment, five receiving a course of ten electroconvulsive shocks. Group II received no bar-pressing training, the measure of hunger being amounts of food eaten daily. In addition, activity measures (revolving drums) were obtained on all animals.

RESULTS AND CONCLUSIONS: The shocked rats kept at 85% of weight showed a reliable increase (at the

1% level) in hunger as measured by bar pressing and subsequent ad lib. feeding tests. This increase could not be explained in terms of concomitant increases in activity level. The shocked animals allowed to feed ad lib. ate significantly less food for 10 days postshock. The interpretation was made that electroconvulsive shock has two different effects on hunger: decreased hunger if the animals are kept at 85% of weight. This finding has relevance for previous studies of the effect of shock on maze performance and can be used to reconcile differences between the findings of different workers. (Slides)

10:05 A.M. The effect of magnitude of reward on maze learning. ERNEST FURCHTGOTT, *University of Tennessee*.

PROBLEM: Previous investigators using a runway or a single-unit T-maze have found that rate of learning is a function of the magnitude of the food reward. This study was designed to vary the amount of reward in a more complex learning situation.

SUBJECTS: 130 albino rats.

PROCEDURE: Following preliminary training all animals were given one daily trial in a two-unit linear alley T-maze while under a 22-hr. food deprivation schedule. Thirty-seven animals received a 2,500-mg., 26 a 250-mg., 34 a 75-mg., 22 a 20-mg., and 11 controls a 0-mg. food reward in the goal box. Each animal was tested until it had reached a criterion of three consecutive errorless trials; however, all training was discontinued at the end of 25 trials.

RESULTS: Rate of learning measured in terms of average number of errors per trial, number of animals who had reached the learning criterion and the average number of trials that it took to reach this criterion were similar for all rewarded groups, but varied significantly from the control group. However, the running speeds for the two larger reward groups differed significantly from the speeds of the two smaller reward groups.

CONCLUSIONS: In complex learning situations rate of acquisition is not a function of the magnitude of a positive reward, even though performance speed is affected by the size of the reward. The data are thus not in agreement with the results obtained in simpler types of learning; however, they do support partially Hull's revised postulates. (Slides)

10:20 A.M. The effects of noxious stimulus intensity and duration during intermittent reinforcement of escape behavior. MICHAEL KAPLAN, *Columbia University*.

PROBLEM: If a response regularly terminates a noxious stimulus on each occasion of its presentation, we may speak of the *regular* reinforcement of an

escape response. Under *intermittent* reinforcement, however, termination may be contingent upon the response occurrence following a specified duration of noxious stimulation.

In this experiment, intermittent reinforcement schedules were employed, and the white rat's bar-pressing rate under aversive light was determined as a function of (a) six intensities (25, 103, 169, 493, 892, and 2149 footlamberts) at a .5-min. duration and (b) seven durations (0.2, 0.5, 1.0, 2.0, 3.0, 4.0, and 5.0 minutes) under a brightness of 169 footlamberts.

SUBJECTS: 11 male Wistar albino rats, maintained under ad lib. feeding in a darkened room.

PROCEDURE: (a) All rats were trained to stand on a two-rod perch, 41 in. above the floor and $7\frac{1}{2}$ in. below a ground glass ceiling of an enclosed chamber. The glass was the bottom of a lamp housing, and a bar projected into the chamber at perch level, $\frac{1}{8}$ in. away from the front rod. (b) All rats received 42 sessions of regular reinforcement, during which each bar-press in light (169 footlamberts) terminated it for 1.1 minutes. (c) During additional sessions, under intermittent reinforcement, intensities were varied for six of the rats, durations for five. Each rat received an average of 15 training sessions under each of the six intensity values or seven duration values, and the order in which these conditions were presented differed for each animal. (d) Each experimental session was approximately 25 minutes long.

RESULTS: (a) The curve relating rate of escape responding to noxious stimulus intensity appears to pass through a maximum between 103 and 493 footlamberts. (b) The curve relating rate of escape responding to noxious stimulus duration is a decreasing monotonic function. (Slides)

10:35 A.M. Experimental studies of the motivational effect of conflict. EDGAR L. LOWELL, *Harvard University*.

Predictions based on an hypothesis that conflict produces drive were tested with white rats on a straight runway discrimination apparatus. Animals were trained to run on a lighted or dark runway to obtain food or to avoid a buzzer. Choice was between two 5-ft. runways on either side of a central starting box. Measures were taken of running speed, latency, and activity. After the discrimination was well established, conflict was introduced by presenting combinations of positive and negative cues to approximate approach-approach, approach-avoidance, and avoidance-avoidance conflicts.

The conflict-drive hypothesis leads to the prediction that conflict, defined as the simultaneous evocation of incompatible response tendencies, would lead to an

increase in drive. It was assumed that the demonstration of the drive increase would depend on an interaction between the increased drive and the directional tendencies elicited by the cues that produced the conflict.

Results of the tests indicate that, as measured:

1. Approach-approach conflict produces significantly faster running speed and no change in latency.
2. Avoidance-avoidance conflict produces significantly longer latency and a slight, although not significant, decrease in running speed.
3. Approach-avoidance conflict produces faster running speed and no change in latency.

The implications of these findings for conflict theory are discussed. (Slides)

SENSORY II

9:50-10:50 A.M., Monday, Pan-American Room,
Mayflower

LORRIN A. RIGGS, Chairman

9:50 A.M. Light adaptation in the human eye as measured by the electroretinogram. ROBERT M. BOYNTON, *Brown University*.

PROBLEM: To investigate the retinal basis of the time course and spatial locus of light adaptation.

METHOD: Three subjects with normal vision were used. Direct-coupled amplification was employed to obtain continuous records of potential differences between the forehead and a corneal electrode supported by a contact lens. After 45 min. preliminary dark adaptation, test flashes were delivered at various intervals after the onset of an adapting stimulus; responses to both adaptation onset and test flash were recorded. The adapting stimulus was varied in wave length, area, and intensity; test flashes of small area (3° to 7°) and various intensities were employed.

RESULTS: (a) The sensitivity of the retina, as evaluated by the height of the *b*-wave component of the test flash response, decreases markedly within .15 sec., reaches a minimum within .6 sec., rises to a maximum (still well below the dark-adapted level) after 3-5 sec., and then declines very slowly and steadily for 2 to 8 min. (b) There is a high correlation between the response-producing and adaptive capacities of stimuli, regardless of area or wave length. (c) Attempts to "adapt out" specific peripheral mechanisms result instead in a general retinal adaptation.

CONCLUSIONS: (a) The time course of light adaptation, measured with the ERG, parallels certain psychophysical and physiological (optic nerve) data. (b) The ERG to small stimuli has previously been shown to result primarily from stray light which stimulates vast peripheral regions. Stray light now

appears equally important in adaptation. This is of particular significance with respect to the notion of a general level of retinal adaptation to stimuli of limited extent. (Slides)

10:05 A.M. The effect of high intensity and short duration versus low intensity and long duration of intermittent pre-exposure upon human dark adaptation. F. A. MOTE and ELEANOR C. REED, *University of Wisconsin*.

The recovery of dark adaptation was measured after two durations of pre-exposure to continuous light and after two conditions of intermittent light. For the continuous condition the durations were 60 and 180 sec. and the intensities were 140, 280, and 560 m.L. For both intermittent conditions a cycle of light and dark lasted one second; the ratios of light-to-dark per cycle were $\frac{1}{2}$ - $\frac{1}{2}$, $\frac{1}{4}$ - $\frac{3}{4}$, $\frac{1}{8}$ - $\frac{7}{8}$, and $\frac{1}{16}$ - $\frac{15}{16}$ (to take $\frac{1}{8}$ - $\frac{7}{8}$ as an illustration, the light was on for $\frac{1}{8}$ sec. and off for $\frac{7}{8}$ sec. in one cycle). The total quantity of light was the same for all conditions; for one intermittent condition the intensity was the same as for the continuous but the duration was varied; for the other, the duration was the same but the intensity was varied.

All measurements were made with a Hecht-Shlaer adaptometer. The right eye was used and fixation was 7° nasally. The pre-exposure light was white, covering about 35° visual angle; the threshold testing stimulus was blue and subtended 5° visual angle. All pre-exposures and test measurements were made through a 2-mm. artificial pupil. Two subjects were used.

The two main results are: (a) On the whole, the dark adaptation curves obtained after the continuous pre-exposure and those after the intermittent condition of the same duration but higher intensity are similar, despite the 16 to 1 variation in intensities. (b) When the continuous curves and those for the same intensity but longer durations are compared they are dissimilar, the more so the shorter the light-time in the light-dark ratio (i.e., the longer the duration). As the amount of light-time decreases the initial threshold of dark adaptation is lower and the rate of recovery of dark adaptation is more retarded. (Slides)

10:20 A.M. A study of the relationship between scotopic visual acuity and acuity at photopic and mesopic brightness levels. JOSEPH ZEIDNER, JULIUS E. UHLANER, and DONALD A. GORDON, *Personnel Research Section, AGO, Department of the Army*.

PROBLEM: The classical visual acuity-brightness function shows mean acuity at varying brightness levels. The approach in the present study was somewhat

different. By correlating acuity scores at various brightness levels, description may be made of the consistency of individual rankings from level to level. This problem is related to the interest of the Army in developing an operational test to predict night visual performance to be administered at a mesopic brightness level. It is also of theoretical interest in relation to the physiological functioning of the receptors at various brightnesses.

SUBJECTS: 16 staff members of the Personnel Research Section selected to show a wide range of scotopic acuity scores were employed as subjects. Age range was from 24 to 44 years, median age 31 years.

PROCEDURE: Scotopic acuity was measured with the Army Night Vision Tester. Brightnesses ranged from 3.51 to 5.26 micromicrolamberts. Mesopic and photopic acuities were measured with various wall chart tests, and targets used in a modified Ortho-Rater. Brightness levels ranged from 6.03 to 10.60 log micromicrolamberts. All testing was conducted with corrected vision. For mesopic levels, initial dark adaptation time was ten minutes. Testing began at the lowest brightness level and progressed through a total of eight increasingly higher brightness levels. An adaptation period of 15 to 30 seconds was provided at each level before testing was initiated.

RESULTS: Scotopic acuity scores yielded moderate positive correlations with the photopic acuity scores and substantially higher correlations with mesopic acuity scores. The stability of individual differences in scotopic acuity was demonstrated by the magnitude of these correlations based upon tests taken a year apart. Age did not contribute spurious covariance to the vision variables. These relationships indicate the feasibility of developing mesopic tests sufficiently predictive of night vision ability.

10:35 A.M. Effect of retrochiasmal lesion upon variability of the absolute visual threshold. HOWARD P. KRIEGER, *New York University College of Medicine*. (Sponsor, Morris B. Bender)

Hecht demonstrated that only five to fourteen quanta at the retina were the stimulus for the absolute visual threshold event in normal subjects. He concluded therefore that variation in the frequency of arrival of quanta at the retina and not biological variation determined threshold variability.

In this study, the variability of the absolute visual threshold was examined in six patients. Ophthalmoscopically the retina appeared normal in each case. Routine perimetry disclosed homonymous hemianopia indicative of retrochiasmal pathology. However, examination of these "blind" fields in complete darkness with luminous targets showed presence of some

function. For example, the mean visual threshold after 40 min. in the dark was raised 500-1,500 times ($\mu\text{ml.}$) in four cases, but was within normal limits in two. In all six cases, threshold variability was significantly increased. In the two cases with normal thresholds, variability declined to normal as the perimetric defect cleared.

The foregoing observations are difficult to integrate into Hecht's theory. If random arrival of quanta were the essential determinant of threshold variability, then raising stimulus intensity should reduce variability by increasing the frequency of arrival of quanta at the retina. In four cases, to reach the threshold, stimulus intensity had to be raised 500-1,500 times, yet variability was significantly increased. In cases with normal mean absolute thresholds, the increased variability gradually declined even though the same stimulus intensity was always used.

The apparent disagreement between our data and Hecht's theory might be resolved by attributing variability in our cases to retrograde effects upon retinal photochemistry, or assuming threshold variability in brain injured to be differently determined than in normals. However, Crozier's concept of the availability of neurons might be more parsimonious, particularly since the mean and variance of the absolute visual threshold were found to be independent functions in this study. (Slides)

MOTIVATION III

11:00-12:00 M., Monday, East Room, Mayflower

JUDSON S. BROWN, Chairman

11:00 A.M. The role of motivational level in simple trial-and-error learning. GERALD ROSENBAUM, EDWARD J. PICKERING, and ROGER B. WILLSON, *Wayne University*. (Sponsor, Gerald Rosenbaum)

PROBLEM: The experiment was designed to study the effect of two motivational levels upon the acquisition of a simple motor reaction when competing reaction tendencies have previously been equated. It was hypothesized that high drive would produce greater learning of the initial competing responses and slower learning of the "correct" response. The latter hypothesis is generated by the observation that increments in response strength for a "correct" response and decrements for an "incorrect" response tend to be smaller at more advanced stages of learning.

SUBJECTS: 28 college students.

PROCEDURE: Subjects received equal practice in making a simple motor reaction either to the right or left side in response to a signal light located in the ap-

propriate direction. A neutral central light was then presented and subjects were required to learn which of the two responses would turn out the light. High-drive instructions emphasized the importance of the experiment, while low-drive instructions stressed its routine nature. Reaction latency, errors, and trials to criterion were employed as measures of learning.

RESULTS: The high-drive group exhibited faster reactions and more learning during the initial training trials on the alternate responses. In learning the "correct" response, their learning curves rose more slowly but reached the same limit as the low-drive group. High-drive subjects showed significantly poorer performance on the test trials in mean reaction latency, number of errors, and trials to criterion.

CONCLUSION: It was concluded that motivation may serve to impede learning in situations involving competing reaction tendencies of equal strength. The results are discussed in terms of learning theory and implications for approach-approach conflict and ego-involved learning are cited. (Slides)

11:15 A.M. Performance at "zero" hunger drive as a function of habit strength and degree of deprivation before satiation. MITCHELL M. BERKUN, *Yale University*.

PROBLEM: To study the nonreinforced performance of a habit after the hunger used during learning is satiated, as a joint function of (a) the number of reinforced training trials (habit strength) and (b) the degree of food deprivation immediately preceding satiation.

SUBJECTS: 70 male albino rats.

PROCEDURE: Hungry animals were trained to press a bar to get food. Three groups received respectively 1, 3, or 6 consecutive daily sessions, each of 70 regularly reinforced trials. Each group was divided into 2 subgroups, one of which had more food deprivation than the other. On the day following the last training session, all animals were fed until they consistently refused proffered food, and were then immediately given a 23-min. nonreinforced session with the bar. Latency, rate, and resistance to extinction were measured.

RESULTS: 1. While being satiated, rats with *less* deprivation ate reliably *more* than those with more deprivation. 2. The procedure for the less-deprived rats trained for one day virtually duplicated that used by Koch and Daniel, and the results were the same, i.e., almost no responses. 3. For the less-deprived animals, speed of responding and resistance to extinction were *increasing* functions of the number of training sessions. All differences were statistically

reliable. 4. For the more-deprived animals, the same comparisons yielded flat curves which crossed the curves for the less-deprived animals. In the group trained for one day, the more-deprived animals gave reliably *more* responses than the less deprived animals; in the 6-day group, the more-deprived animals gave reliably *fewer* responses than the less-deprived group.

CONCLUSIONS: Increased deprivation before satiation tends to *increase* the performance under satiation of a weak habit and *decrease* the performance under satiation of a strong habit. (Slides)

11:30 A.M. Food preferences as a function of the method of measurement. ELIOT STELLAR and ROBERT A. MCCLEARY, *Johns Hopkins University and School of Aviation Medicine*.

PROBLEM: To compare the preferences of rats for glucose and for sodium chloride under three conditions: the single stimulus situation and two variants of the two-bottle choice situation.

SUBJECTS: 18 male rats.

PROCEDURE: Concentrations of glucose and sodium chloride covering the range of the rat's preference and aversion were used. (a) Each rat was tested in the single stimulus situation under 15 hr. of water deprivation and were allowed one concentration of salt or sugar or of plain water each day. (b) Then they were tested in a two-bottle choice situation in which each concentration of sugar or salt was paired with water for a 24-hr. period. The concentration was changed each day. (c) Finally, they were tested in a situation in which each concentration of salt was tested with every other salt concentration and each concentration of sugar was tested with every other sugar concentration. At selected times, continuous records of the drinking of animals were made with the drinkometer. Also esophageal fistulas were produced in four animals and they were retested on selected parts of the three series described above.

RESULTS: In the case of glucose, the maximum preference shifted from 5% to 10% to 20% when they were tested by methods 1, 2, and 3 respectively. Checks showed that this result was not due to the order in which the three methods were used. Maximal salt preference showed no shift when the three methods were used, but stayed consistently around .8%. The fistulated animals gave essentially the same results as the normal animals.

CONCLUSION: An interpretation will be offered to show that these results may be accounted for by the fact that oral and gastric factors interact differently (a) in the three methods described and (b) in the cases of glucose and sodium chloride preference. (Slides)

11:45 A.M. Water ingestion as a function of previous food and water deprivation. OGDEN LINDSEY and WILLIAM S. VERPLANCK, *Harvard University*.

PROBLEM: To investigate the influence of different combinations of food and water deprivation upon water ingestion.

SUBJECTS: 32 albino rats (16 Hisaws and 16 Wistars).

PROCEDURE: The animals were housed in a humidity and temperature controlled room with a standard light-dark cycle. They were put on a feeding schedule of free access to water with one hour of food a day for 15 days pre-experimental weight stabilization. On the 25 experimental days the animals received the following treatment: All groups had 21 hours access to water, without food, followed, for a one-hour period, by: for Group W—access to water, no food; for Group O—no water, no food; for Group FW—access to both water and food; for Group F—access to food, no water. All animals then ran down a runway to .5 cc. of tap water. The twenty-third hour of the day, for all groups, was spent with free access to water and no food. The water ingested during this hour was measured. During the twenty-fourth hour, all rats had free access to both food and water.

RESULTS: The water-satiated, 22-hour food-deprived rats (Group W) drank 1 cc. of water in the measuring hour. The animals with one hour of water and 22 hours of food deprivation (Group O) drank about 2 cc. in the next hour. The water- and food-satiated animals (Group FW) ingested about 4 cc. The animals that had been food deprived and were then given free access to food, but no water (Group F), drank about 11 cc.

CONCLUSION: Water ingestion is dependent upon previous food deprivation as well as on water deprivation. Food-deprived water-satiated rats which are given one hour of food access and water deprivation will drink approximately five times as much water as rats that have been just water-deprived for an hour. Strain differences and the relation of water ingestion to runway latencies and response times as measures of a water drive are discussed. (Slides)

BRAIN FUNCTION

11:00-12:00 M., *Monday, Chinese Room, Mayflower*

HARRY F. HARLOW, *Chairman*

11:00 A.M. An exploratory study of the relationship between subcortical lesions and emotional behavior in the albino rat: The septal area of

the forebrain. WALLE J. H. NAUTA and JOSEPH V. BRADY, *Army Medical Service Graduate School*. (Sponsor, Joseph V. Brady)

This report describes an exploratory experiment on the acquisition and retention of a conditioned emotional response (CER) and on the general emotional reactivity of albino rats with subcortical lesions. The CER consisted of crouching, immobility, and defecation in a "grill box" upon presentation of the conditioned stimulus, a clicking noise, which, after 3 min. duration, was reinforced by the unconditioned stimulus, a mildly painful shock delivered through the grill.

Sixteen male albino rats were divided into three groups. In Group I (4 animals) lesions were produced in the septal forebrain area prior to conditioning. In Group II (6 animals) lesions were produced in the septal forebrain area following conditioning. Group III was conditioned and served as controls.

Conditioning of all three groups was begun 3 days after operation of Group I. The CER was established in all animals by 6 pairings of clicker and shock distributed throughout a 10-day period. No significant difference in rate of acquisition appeared among the three groups.

On the day following the 6th conditioning trial, Group II was operated, and tests for retention of the CER were begun in all animals of all groups three days later. While complete retention of the CER was evident in Groups I and III (all animals crouched, defecated, and remained completely immobile during clicker), the CER appeared significantly diminished in Group II (all animals moved about somewhat and only two defecated during clicker).

Pre- and postoperative ratings of emotional behavior were obtained for Groups II and III using a seven-item scale. Significant and dramatic immediate postoperative increases in emotional reactivity will be illustrated by motion pictures.

The relationship between the extent and location of the lesions (histological verification), the magnitude of the changes in emotional reactivity, and the degree of diminution in retention of the CER will be discussed. (Slides)

11:15 A.M. Weight and size judgments in somesthetic after penetrating injury to the brain. SIDNEY WEINSTEIN, *New York University College of Medicine*.

PROBLEM: Impaired ability to judge weights on supported or unsupported hands has been considered the most frequent after-effect of parietal lobe lesion in man. More recent data, however, suggest a surprising

resiliency of this function when affected or normal hands are tested singly; by contrast, simultaneous stimulation of both hands (bilateral testing) was reported to reveal significant constant errors between the hands. Thus far, no data exist comparing the effects of bilateral simultaneous and successive stimulation. The present study provides such data for normal and brain-injured subjects.

SUBJECTS: 60 men with battle injuries of the nervous system; subdivided into four groups (15 each): (a) men with penetrating brain injury, history of sensory symptoms, and present tactile deficit of the hand; (b) brain injury but no history or present signs of sensory deficit; (c) without brain injury but with peripheral nerve lesion of the arm; (d) without brain injury but with peripheral nerve injury of the leg (controls).

PROCEDURE: Stimulus objects were two identical brass cylinders placed on the supported hands, simultaneously or successively (intervals from 0.1 to 5 seconds) by solenoids, automatically controlled through electronic timers. Subjects judged, in the "intensity series," whether objects on the "affected" hand were heavier or lighter than on the "normal" hand, and in the "extensity series" whether larger or smaller.

RESULTS: Successive bilateral testing revealed significant constant errors for weight judgments between affected and normal hands for both brain-injured groups, but not for the groups with peripheral injury. Group 1 (brain injury and sensory deficit) significantly overestimated weights on the affected hand; Group 2 (brain-injured without sensory deficit) significantly underestimated them. Successive size judgments revealed similar but less pronounced trends. Simultaneous bilateral testing also gave similar results except that the brain-injured group with sensory deficit significantly underestimated the size of the stimulus object. (Slides)

11:30 A.M. A study of the functions of visual areas I and II in the cat. HIROSHI ODOY and WILLIAM D. NEFF, *University of Wisconsin and University of Chicago*.

PROBLEM: Through the use of modern electrophysiological methods, considerable new information has been added recently to our knowledge of the organization of the visual areas of the cerebral cortex. In the present study this new information was used in an attempt to extend our understanding of the neural basis of visual discrimination.

SUBJECTS: 4 adult cats.

PROCEDURE: Ocular reflexes, movement perception, distance perception, size discrimination, and size constancy were tested before and after bilateral

ablation of visual area I, visual area II, or visual areas I and II.

RESULTS: In animals with visual I or with visual II selectively ablated, little or no loss could be demonstrated in the visual tests following the recovery period. The size discrimination habit was lost by both groups. More trials were required for relearning than for original learning preoperatively. In size constancy test trials no loss could be demonstrated in these animals.

Severe defects or complete loss in all visual tests except those of the visual reflexes occurred after complete bilateral ablation of visual areas I and II. (Slides)

11:45 A.M. Form and brightness discrimination of the cat after selective ablation of the cortical visual areas. WILLIAM ROBERT THOMPSON, *McGill University*.

PURPOSE: The purpose of the experiment was to explore the functions of visual I and II and remaining cortical visual areas in the suprasylvian gyrus as defined in the cat by the evoked potential method.

PROCEDURE: 8 cats were used; 4 were trained preoperatively and tested postoperatively, and 4 were tested postoperatively only; 11 pattern discriminations and 6 brightness discriminations of varying degrees of difficulty were given to the animals. Criterion was set as 18 correct choices out of 20. Operations, all bilateral, were as follows: visual I was ablated in 3 cats, visual II in 3 others, and in another visual II plus the suprasylvian gyrus. In the last cat, visual I and II were removed together. Cortical tissue was removed by suction.

RESULTS: In one visual I and one visual II cat, no loss could be demonstrated in either pattern or brightness discrimination. The other two visual I and the other two visual II cats retained an ability to discriminate simple but not complex patterns. Brightness discrimination was not affected. The animal with visual II and the suprasylvian ablated showed no greater loss in discrimination than the visual II cats. The visual I and II animal showed only elementary optic reflexes.

CONCLUSIONS: From the above results, we may conclude: (a) within the limits of testing, visual I and II duplicate each other functionally, as well as electrically. Either may subserve pattern and brightness discrimination, though removal of both results in almost complete blindness, (b) the suprasylvian loci, while adding little to visual functioning if a considerable amount of cortex remains intact, may be important in mediating residual visual function when they alone remain after visual I and II have been ablated. (Slides)

LUNCHEON AND MEETING OF EXECUTIVE COMMITTEE

12:15 P.M., Monday, Room 237/8, Mayflower

PERCEPTION I

1:40-2:40 P.M., Monday, East Room, Mayflower

JAMES J. GIBSON, Chairman

1:40 P.M. Effect of asymmetrical figural stimulation on the apparent median plane and its relation to hemianopic disturbances. JAN H. BRUELL, *Clark University*. (Sponsor, Heinz Werner)

PROBLEM: This paper deals with shifts in the apparent median plane induced by asymmetrical figural stimulation. Asymmetrical stimulation is defined as stimulation by a figure which extends to one side of fixation. The shifts of the apparent median plane observed in our subjects will be related to spatial displacements found by W. Fuchs in hemianopics.

PROCEDURE: Twelve experiments, 24 Ss in each, were carried out. The general procedure was as follows: In a darkroom, a luminescent figure was presented with its left (right) edge in the objective median plane. This edge was fixated and adjusted to the apparent median plane. The experiments differed with respect to the shape of figures used, the luminosity of the figures, their complexity, etc. The common feature of all twelve experiments was that they provided for evaluation of the effect of asymmetrical figural stimulation on the apparent median plane.

RESULTS AND CONCLUSIONS: Under the various conditions of the experiment the apparent median plane was displaced away from the objective median plane and toward the center of the figure. Moreover, the larger the horizontal extent of the figure, the greater the shift. These results were consistent throughout and highly significant ($p < .01$) in each of the twelve experiments.

Our results show striking correspondence to pathological phenomena described by Fuchs in his classical studies on hemianopsia. This close correspondence is understood on the basis that asymmetrical figural stimulation induced under experimental conditions in normals exists in hemianopics as a consequence of their pathological condition.

That displacements of the apparent median plane can take place under such widely differing conditions as obtain with normals and hemianopics gives support to the notion that general principles are involved. Such principles will be discussed. (Slides)

1:55 P.M. Texture and the perception of slant.

HOWARD E. GRUBER and W. CRAWFORD CLARK,

Queen's University. (Sponsor, Howard E. Gruber)

This study is an experimental test of the hypothesis that the perceived slant of a textured surface varies directly with the coarseness of the stimulating texture, when the gradient of texture density is held constant. Incidentally, verification is provided for recent work showing that a gradient of texture density can produce an impression of slant in the absence of other cues.

The subjects were 12 university students.

The apparatus consisted of a well-textured surface, presented at various slants and viewed through a reduction screen, and a comparison object which *O* adjusted until it appeared to have the same inclination as the slant of the stimulus surface. The coarseness of the texture of the stimulus surface was varied by altering its distance from *O*. The stimulus was presented at four distances and at three slants. Each *O* made 10 judgments at each position, and the order of presentation of the positions was different for each *O*. The aperture of the reduction screen was chosen so that *O* could not see the edges of the stimulus surface. A headrest was used, and all judgments were monocular.

The results showed that different gradients of texture density produced different impressions of slant. But, for a given gradient, perceived slant decreased as the texture became finer, even though the individual units composing the textured surface were clearly visible at all times. The rate of decrease can be expressed as a function of the retinal image size of the individual units of texture, or of the number of units of texture included in a given visual angle. An adequate theory of slant perception must consider the fact that these properties of a visual surface may vary while the gradient of texture density is held constant. (Slides)

2:10 P.M. Influence of visual stimulation on kinesthetic figural after-effects. ROBERT JAFFE, *New York University College of Medicine*.

PROBLEM: Figural after-effects have been demonstrated for vision and kinesthesia. No data exist on after-effects across modalities, e.g., influence of intercurrent visual stimulation on kinesthetic size judgments. The present study provides such data.

SUBJECTS: 20 normal adults (10 experimentals and 10 controls).

PROCEDURE: The method of Köhler and Dinnerstein was used in modified form. All subjects rubbed one hand along an aluminum strip, two inches in width, and judged its width by finding the subjectively equal width on another strip, of graduated width ("scale"), held by the other hand. Following an initial

judgment ("standardization"), all subjects were required to rub their hand again along the two-inch strip for one minute ("stimulation period"). After that, a second width judgment was obtained, in the same fashion as the first. The experimental group wore goggles which restricted their field of vision to a black screen, on which they saw a vertical strip of white paper. During the standardization period, the strip displayed visually was two inches wide; the subjects looked at this strip while comparing (by kinesthesia) standard aluminum strip and aluminum "scale." During the stimulation period, while the subjects rubbed their hands again along the two-inch strip, the paper strip (displayed visually) was either one or four inches wide.

RESULTS: The control group (blindfolded) made equal kinesthetic width judgments before and after the stimulation period. The experimental group significantly underestimated the width of the aluminum standard following stimulation periods in which the four-inch paper strip was visually displayed; following display of the one-inch strip, they tended to overestimate the standard.

CONCLUSIONS: Available physiological theories of figural after-effects postulate a relatively circumscribed "electrotonic" change within specific cerebral sensory systems (visual cortex, somatosensory cortex). The present results, demonstrating effects across modalities, require a different theoretical approach. (Slides)

2:25 P.M. The development of differential word recognition. DONALD G. FORGAYS, *Human Resources Research Center, Randolph AFB.*

PROBLEM: In recent experimentation designed to investigate the accuracy of tachistoscopic recognition of words placed in the right and left peripheral fields of vision, it was found that subjects recognized significantly more words placed in certain parts of the right visual field than in corresponding parts of the left. The results were felt to be confirmatory of a hypothesis of a selective retinal training arising from the reading situation. To obtain further evidence concerning this hypothesis a developmental study of word recognition was undertaken.

SUBJECT: 144 students; twelve from each of the school grades 2 to 10 and from the first three college years.

PROCEDURE: Twenty common 3- and 4-letter English words (taken from an elementary reader) were presented tachistoscopically to the student subjects. The stimulus words were presented in random order to the left or right of central fixation. Subjects, words, and direction of words from the fixation point were arranged in a latin square for each school grade level group of twelve subjects. Frequency of recognition

for any one group could then be determined for each visual field apart from particular subject or particular stimulus words.

RESULTS: Four groups were obtained by a combination of data from various of the grade levels: (a) second to the fourth grades; (b) fifth to the seventh grades; (c) eighth to the tenth grades; and (d) first, second and third college years. Recognition scores of words presented to the left and to the right of fixation were compared for these groups. Total recognition score was found to gradually increase from the lower to the higher education groups. Better recognition of words presented to the right of fixation over the left was found for the two higher education groups. About equal right-left recognition was found for the two lower education groups.

CONCLUSIONS: The results support the hypothesis of a selective retinal training arising from the reading (educational) situation. They are inconsistent with the theory of a general equipotentiality in vision.

PERFORMANCE FACTORS I

1:40-2:40 P.M., Monday, Pan-American Room, Mayflower

CARL P. DUNCAN, Chairman

1:40 P.M. Decremental factors associated with distribution of rotary pursuit practice. R. B. AMMONS, L. WILLIG, and C. H. AMMONS, *University of Louisville.* (Sponsor, R. B. Ammons)

PROBLEM: To determine the relationship for rotary pursuit between amount of previous massed or distributed practice and amounts of temporary work decrement, warm-up decrement, and permanent work decrement.

SUBJECTS: 128 girls from the eleventh and twelfth grades.

PROCEDURE: Ss practiced 90 min., then were tested for 20 min. Half practiced under each of two conditions: (a) cycles of 10 min. work, 20 min. rest (massed practice); (b) cycles of 1 min. work, 2 min. rest (distributed practice). Half of each of these practice groups were then switched to the other condition during the test period. The groups can be identified as follows: (a) 10-20, 10-20; (b) 10-20, 1-2; (c) 1-2, 1-2; and (d) 1-2, 10-20.

RESULTS: Means by 20-sec. trials were calculated for each of the four groups, and the variance of the scores during the 20-min. test period was analyzed. It was found that: (a) large amounts of temporary work decrement developed during massed practice; (b) with increasing proficiency a slight decrease was observed in amount of temporary work decrement developed; (c) essentially no permanent work decre-

ment appeared during practice, both as estimated during practice and as measured during the test period; (d) warm-up decrement decreased as a function of number of times practice had been resumed after a rest; (e) there was an interaction between practice and test condition, with Ss performing better when tested in the same condition as that in which they had practiced.

CONCLUSION: Learning theories predicting a permanent work decrement paralleling temporary decremental effects of massing of practice apparently must be revised.

1:55 P.M. Rotary pursuit performance as a function of initial level of ability. JACK A. ADAMS and BRADLEY REYNOLDS. *Human Resources Research Center, Lackland AFB.*

PROBLEM: Analysis of available data suggested that interactions between initial level of ability and learning variables might exist. In the study reported the interaction between individual differences and distribution of training on the rotary pursuit has been investigated.

SUBJECTS: 960 basic trainee airmen at Lackland AFB.

PROCEDURE: Two groups of 480 subjects each were differentiated on the basis of intertrial rest. Trials were 20 sec. in duration with either 5 or 60 sec. intertrial rests. Twenty trials comprised a session with 30-min. rest between sessions. Massed subjects were given four sessions and distributed subjects were given three sessions.

Upon completion of this study subjects in each group were stratified into deciles on the basis of their cumulative scores for the first five trials.

RESULTS: Distributed group: Results indicate that rate of acquisition and final level of performance are positively related to initial level of ability. No marked interaction was found between initial level of ability and the form of the acquisition curves. There is a tendency for loss of proficiency between sessions with highest and lowest level groups. With intermediate level groups there is no consistent loss and never any gain between sessions.

Massed group: Rate of acquisition and final level of performance are positively related to the initial level of ability. Performance curves during the first session tend to be linear for the low decile groups while high decile groups show performance curves with marked negative acceleration. For all sessions after the first, the lower decile groups show greater between session reminiscence. Amount of warm-up decreases with the number of sessions with the rate of decrease being greater with higher decile groups.

CONCLUSIONS: There is interaction between distribution of practice and initial level of ability. Gains over

rest and warm-up decrement are related to the initial ability level of the subject. (Slides)

2:10 P.M. Decrement and recovery from decrement in a simple work task with variation in force requirements and duration of a single rest. INA McD. BILODEAU and EDWARD A. BILODEAU, *Human Resources Research Center, Lackland AFB.*

PROBLEM: To investigate decrement and recovery over rest as functions of unit-response effort requirements and duration of interpolated rest.

SUBJECTS: 250 basic trainees at Lackland AFB.

PROCEDURE: The apparatus was a manual crank yielding decrement in cranking rate with continuous practice.

The design employed 25 factorial combinations for five degrees of force requirements (work-load) per response and five durations of interpolated rest.

The schedule involved: (a) continuous work for 4'; (b) rest of variable duration; and (c) continuous work for 3' with the prerest work-load. Revolutions per successive 20" (trials) were recorded.

RESULTS: 1. Prerest: Between-load differences in cranking rate were evident in the first trial and were stabilized by the third trial.

2. Recovery with rest: The difference between the first postrest trial and the final prerest trial was an increasing function of rest, for recovery measured in terms of cranking rate or horsepower conversions.

3. Work-load recovery: *Cranking-rate recovery* showed no relation to work-load while *horsepower recovery* increased with increasing work-load.

4. Postrest:

a. Between work-load differences in cranking rate (rest constant) remained essentially constant throughout the final 3' period.

b. Between-rest comparisons indicated more rapid decrement in cranking rate with increasing rest. All rest groups (work-load constant) appeared to be approaching the same asymptote.

CONCLUSION: The data appear most consistent with an interpretation of equal energy expenditure, time equal, for the several work-loads. (Slides)

2:25 P.M. Some effects of various degrees of supplemental information given at two levels of practice upon the acquisition of a complex motor skill. EDWARD A. BILODEAU, *Human Resources Research Center, Lackland AFB.*

PROBLEM: To determine the effects of an extra on-target indicator on a complex perceptual-motor ranging and tracking task (Pedestal Sight Manipulation Test). In view of the exceedingly difficult on-target, off-target discriminations involved, an extra on-

target indicator might well serve to enhance performance.

SUBJECTS: 60 airmen without previous testing experience from Lackland AFB.

PROCEDURE: Supplementary on-target information was provided the S on 0, 50, or 100% of 40 trials, distributed over four days, by automatically reddening the target whenever all sighting responses were momentarily correct. During a test period (Days 4 and 5), groups having had 50 or 100% red-target treatments were given 0; groups given 0% were then given either 0, 50, or 100% red-target treatments.

RESULTS: The treatment affected ranging, the most difficult component of the total task, but not tracking. Group 100% was markedly superior to 0%. Group 50% alternated between the performance of Group 100% and 0% depending upon the presence or absence of the extra cue.

When the extra cue was removed from the situation, performance fell abruptly to the level of the 0% control. When the extra cue was added to the situation late in practice, performance improved progressively to the level of Group 100% which had the red-target treatment throughout.

CONCLUSION: Since there was no transfer it was concluded that the extra cue was necessary for augmented ranging responses. Further, the results clarify the dangers of imputing certain reinforcing and generalization properties to on-target indicators. (Slides)

PERCEPTION II

2:50-3:50 P.M., Monday, East Room, Mayflower

M. E. BITTERMAN, Chairman

2:50 P.M. The role of consonant-vowel transitions in the perception of synthetic stop consonants.

LOUIS J. GERSTMAN, PIERRE DELATTRE, ALVIN M. LIBERMAN, and FRANKLIN S. COOPER, *Haskins Laboratories, N. Y. C., University of Pennsylvania, and University of Connecticut.* (Sponsor, Alvin M. Liberman)

PROBLEM: In spectrographic pictures of the region where consonant and vowel join one commonly sees shifts in the frequency positions of the vowel formants. These frequency shifts, often called "transitions," are quite evident, especially in the second formant, but their role in the perception of speech has not been determined. This report describes an attempt to determine the extent to which these transitions are cues for the perception of the stop consonants.

SUBJECTS: Undergraduate students, linguists and phoneticians.

PROCEDURE: For the voiced stops, eleven second-formant transitions, varying in extent and direction

of frequency shift, were synthesized for each of seven vowels. These were coupled with first formants found previously to give a voiced effect, and recorded from the pattern playback, a machine on which synthetic spectrograms may be converted into audible signals. The 77 sounds thus formed were presented in random order for aural identification as *b*, *d*, or *g* (Test I). With suitable changes in the first formants, comparable sounds were presented as voiceless stops, to be identified as *p*, *t*, or *k* (Test II).

RESULTS AND CONCLUSION: There was significant agreement among subjects in identifying synthetic stops which differed (for any given vowel) only in the direction and extent of the second-formant onset transition. Thus these transitions can be cues for the perception of the stops.

The identification of a given transition varied according to the adjoining vowel, an extreme case being that of a transition which was identified as *d* before one vowel and as *g* before another. It would appear then that the syllable is the appropriate acoustic unit for perception of the stop consonants. (Slides)

3:05 P.M. Shifts in binaural direction finding produced by training under abnormal stimulus conditions. RICHARD HELD, *Harvard University.*

PROBLEM: Experiments have demonstrated that directional localization of a sound source depends upon both binaural stimulation and the inertial forces acting upon the body of a listener. Movement of the head, relative to a source, causes these stimuli to covary in a manner partly determined by the anatomic positions of the ears. If the ears are, in effect, displaced from their normal positions, what effects upon direction finding will be produced by prolonged exposure to the abnormal covariation between the acoustic and inertial stimuli?

SUBJECTS: 9 male students with normal hearing.

PROCEDURE: During training (exposure) each S wore (and heard via) two electronic hearing aids whose microphones were fixed in positions simulating a 22° displacement of his aural axis about the vertical axis of his head. Measurements were taken of the angle at which he "centered the sound" before and after periods of training. Two types of training were used: (a) Natural training—each of 3 Ss wore the apparatus in their normal environments for seven hours. (b) Controlled training—each of 6 Ss walked a fixed triangular path, at a constant speed, for one hour in each of two sessions. Measurements were taken at 20-min. intervals. A stationary source, in the direction of the translational movements of the head, continuously emitted filtered clicks at 60 per sec. The aural axis was displaced so as to keep the sound lead-

ing in the right ears of half of the Ss, in the left ears of the other half.

RESULTS: After (a) (natural training) the subjects reported doubling of the source. The separation of the two "centered directions" was approximately equal to the directional error induced by the displacement of the ears. During (b) (controlled training) the two groups of Ss developed equal and opposite directional shifts at a negatively accelerated time-rate. (Slides)

3:20 P.M. Foreknowledge as a factor affecting perceptual defence and alertness. O. W. LACEY, NATALIE LEWINGER, and JOHN ADAMSON, *University of Pennsylvania*. (Sponsor, Malcolm G. Preston)

The primary purpose of this experiment was to conduct a severe test of the *frequency* criticism leveled against McGinnies' work on perceptual defence. This criticism asserts that the differences obtained in recognition thresholds for taboo and nontaboo words are due to the relatively infrequent occurrence of taboo words in previous *reading* experience, as compared with the nontaboo words, rather than to the amount of taboo associated with the critical words.

If this criticism is taken seriously, it should be expected that in all conditions taboo words will be reported less readily than nontaboo words, or at the least, that the difference in threshold times will become negligible when expectation exists. The criticism becomes untenable if conditions can be developed where taboo words are reported *more* readily. These conditions were realized in the present experiment. It is apparent that the supposition that taboo words are seen infrequently cannot explain the fact that they are reported more readily.

Using 30 subjects each, two independent tests of the hypothesis were made under the same experimental conditions. The experimental variables were (a) degree of taboo associated with the words (four-letter sexual or scatological words contrasted with four-letter nontaboo words); and (b) the degree (none, general, specific) of foreknowledge about the stimulus made available just before the first exposure. In each experiment the cells were staffed by five subjects randomly assigned from a sample of male social science graduate students. Each S was given five words randomly assigned, and the analysis was made relative to the mean recognition thresholds for the first stimulus word.

Both sets of results indicate that, where the S is given no knowledge as to what to expect, taboo word thresholds are significantly higher than for nontaboo words; moreover, that where any degree of knowledge is given the taboo words are consistently re-

ported more rapidly than the nontaboo words. (Slides)

3:35 P.M. The effect of geometrical regularity on pattern discriminations by monkeys. JOHN MICHAEL WARREN, *University of Wisconsin*. (Sponsor, H. F. Harlow)

The purpose of this experiment was to determine the significance of geometrical regularity and area of the figure as determinants of pattern discrimination in the monkey.

The Ss were 7 rhesus monkeys.

The stimuli were 3-in. squares of white cardboard upon which were mounted figures cut from black construction paper. The figures varied in two dimensions: area and geometrical regularity. Six different areas occupying 10, 20, 30, 40, 50, or 60 per cent of the background (card), and ten different forms were used. Five of the forms were regular geometrical figures and the remainder were highly irregular, non-sense forms. The ten forms yielded 45 paired comparisons, 10 between two regular forms, 10 between two irregular, and 25 between one regular, and one irregular form. Since form and area were orthogonal in the experimental design, a series of 270 problems involving different comparisons and size was generated.

Each monkey was tested on six 15-trial discrimination problems per day for 90 days for a total of 540 problems (the series of 270 problems was administered twice).

The results indicate that the monkeys made significantly fewer errors when discriminating one regular from one irregular form than when discriminating between two regular or two irregular forms. There was, however, no significant difference in the number of errors made in discriminating two geometrical forms compared with the number made in discriminating two nonsense forms.

The number of correct responses for all types of comparison was an increasing function of the area of the figures; the difference between the largest and smallest area was approximately twice that between the three kinds of discriminations.

It was concluded that the area of the figure is a more important determinant of pattern discrimination than is regularity or irregularity, and that "good" and "bad" Gestalten are equally discriminable for monkeys. (Slides)

PERFORMANCE FACTORS II

2:50-3:50 P.M., Monday, Pan-American Room, Mayflower

ROBERT B. AMMONS, Chairman

2:50 P.M. Reaction time as a function of preparatory interval for two types of reaction. LAWRENCE KARLIN, *New York University*.

PROBLEM: It was felt that the "optimal" preparatory interval (yielding the shortest reaction time) might be greater for choice than for simple reaction time because of the element of uncertainty involved in the former type of reaction. The relationship between reaction time (RT) and preparatory interval (PI) has been intensively studied only for the simple type of reaction; therefore, it is not known to what extent one may generalize from these results to other more complex types of reaction. For these two reasons the present experiment undertook to compare the relationship between RT and PI in both simple and choice reactions.

SUBJECTS: 8 college students.

PROCEDURE: Each subject attended two sessions on different days at which either simple or choice reaction times were obtained. The preparatory stimulus, repeated for the simple reaction stimulus, was always a 500-cycle tone. In the choice reaction S responded by lifting the right or left finger from a twin reaction key according to whether a 200- or 1,000-cycle tone was sounded. PI's of $\frac{1}{2}$, 1, 2, 3, 4, and 8 seconds were each presented in blocks of 15 trials. These blocks varied in counterbalanced ascending and descending order rotated among the subjects. All tones were equal in loudness and duration (.2 second) and were generated by a Triplett audio-oscillator. The PI's were controlled by an electronic timer and the RT's were measured by a Jenkin's chronoscope.

RESULTS: For simple RT the mean RT increased linearly with increasing PI. For choice RT there was a significant decrease in RT at the 1-second PI. After this, RT increased regularly with increasing PI. The important difference between the two curves was that the shortest PI used, one-half second, was optimal for simple RT while the 1-second PI was optimal for choice RT.

CONCLUSION: These results suggest that the "optimal" preparatory interval is longer for the more complex type of reaction. (Slides)

3:05 P.M. The *Einstellung* phenomenon and effortfulness of task. ABRAHAM S. LUCHINS, *McGill University*.

PROBLEM: To investigate the relation of the phenomenon of *Einstellung* or mental set to effortfulness of task and, in particular, to the effort-differential between the practiced procedure and the nonhabituated procedure.

SUBJECTS: 44 McGill University students.

APPARATUS: Eleven paper-and-pencil mazes; the first six were solvable by following a circuitous path;

mazes 7, 8, 10, 11 (the criticals) were solvable by both the circuitous and by a more direct route, but in maze 9 (extinction task) the indirect path was blocked and only the direct route available.

PROCEDURE: Mirror-tracing apparatus was utilized since use of the mirror-image had little influence on tracing of the direct route but increased considerably the effort involved in tracing the circuitous route. In individual experiments, half of the Ss received the series of mazes in the mirror-tracing apparatus and, immediately afterwards, received the mazes outside of the mirror. For the other half, the order of presentation was reversed.

RESULTS: From an unqualified principle of least effort, it follows that the less effortful route should be used. Yet in the initial presentation over 85 per cent of the Ss utilized the indirect, more effortful path in the first critical; moreover, the strength and duration of the *Einstellung* was significantly greater in the mirror situation in spite of the greater effort-differential. The second presentation of the mazes yielded little *Einstellung*, results being identical in and outside of the mirror.

CONCLUSIONS: Implications are drawn for the principle of least effort as well as for various relationships involving the effort variable which have been deduced from Hull's reactive inhibition theory and from the fatigue theory of extinction.

3:20 P.M. Muscle action potentials produced in various ways and their relation to quantitative and qualitative measures of ergographic work. SHERWIN J. KLEIN, *University of Pennsylvania*.

The objectives of the experiment were twofold: (a) To determine whether tensions, produced on the one hand by different rates of work and on the other by a report of success or failure, have the same relationship to work; and (b) To determine whether the relationship between tension and three measures of work depends upon the specific aspect of performance under examination.

The procedure was as follows: 120 male subjects were asked to do an ergographic task, limited to 16 excursions. Upon completion of the task, half of the subjects were given a report of success and the other half were given a report of failure. After a short rest, half of each of the above two groups was asked to work to exhaustion at a fast rate. The other half worked to exhaustion at a slow rate. Muscular tension levels were recorded throughout the routine for each subject. (Muscle action potentials were used as an index of tension.) The performance was measured during the initial and final tasks in three aspects; namely, accuracy, output, and variability.

CONCLUSIONS: The tension preceding and also that

during the final work was related to both output and variability of work regardless of how the tension was produced. Tension preceding the final work was not related to accuracy. However, under certain conditions, tension during the final work was related to accuracy. In general, the relationships between tension and output and tension and variability of work were similar whether the relationship studied was within groups (correlations) or between groups (analysis of variance). (Slides)

3:35 P.M. An electromyographic study of tension in interrupted and completed tasks. A. ARTHUR SMITH, *McGill University*.

PROBLEM: Lewinian theory attributes the phenomena associated with task interruption to the presence of undischarged "tension-systems." The present study attempts to explore the relationship of such "tensions" to muscular tension in motor tasks.

SUBJECTS: 8 college students and 7 RCAF servicemen.

PROCEDURE: Each S carried out four mirror-tracing tasks, two of which were interrupted. Simple geometrical figures were used. Bipolar EMG's from forehead, neck (trapezius), chin (speech muscles), and extensors of right and left arms were recorded continuously before, during, and after mirror drawing.

RESULTS AND CONCLUSIONS: 1. Comparison of the tension immediately before and after cessation of drawing revealed a significantly greater tensional decrease following completion. This difference was found for active arm, neck, and for speech muscles.

2. Tension in the active arm increased smoothly and steadily during the mirror tracing.

3. A clear relationship was found between tension during performance and perceived distance from the goal.

4. A neuropsychological model is presented to account for these findings. (Slides)

BUSINESS MEETING AND PRESIDENTIAL ADDRESS

4:00-6:00 P.M., Monday, Ballroom, Mayflower

HAROLD SCHLOSBERG. Some Dimensions of Emotion.

DISCRIMINATION LEARNING I

8:40-9:40 A.M., Tuesday, Ballroom, Mayflower

ROBERT A. PATTON, Chairman

8:40 A.M. Provitamin A selection by the vitamin A depleted rat: establishment of discrimination learning under conditions of generalized and de-

layed need reduction. ARTHUR HARRIMAN, *Cornell University*. (Sponsor, Robert B. MacLeod)

PROBLEM: Previous attempts to establish provitamin A selection in vitamin A depleted animals report negative results. If learning were achieved, the findings would bear upon certain aspects of reinforcement learning theory for the following reasons: (a) The vitamin alcohol occurs in the blood not earlier than 60 minutes following oral administration of the precursor. (b) The vitamin is generalized in effect and is active for many hours.

SUBJECTS: 30 rats.

PROCEDURE: The U.S.P. method of assay for vitamin A was employed. Forty-two eighteen-day-old rats were placed in three equated sections. Two sections were given the U.S.P. test diet for 21 days. A control section was given the test diet plus vitamin A. On the 22d day, twenty survivors from the experimental sections and ten controls were placed in individual cages. One cup in each cage contained the test diet; the other cup held compressed alfalfa meal. The alfalfa cups were weighed daily for 34 days.

RESULTS: For 14 days, alfalfa intakes for both groups were comparable. From that point, the experimental animals ingested progressively larger amounts of the provitamin-bearing meal. The mean intakes of the two groups for the entire experiment were significantly different at the one per cent level of confidence.

CONCLUSIONS: The results suggest that discrimination learning may be developed even when the factor of need reduction is delayed and when that need reduction is nonspecific in nature. Possibly, then, a more complex and obscure chain of secondarily reinforcing connections may be established than has been suggested by previous experimental findings. (Slides)

8:55 A.M. The efficiency of the serial multiple visual discrimination apparatus (SMVDA) and method with white rats. PAUL E. FIELDS, *School of Aviation Medicine*.

PROBLEM: To develop an apparatus and method which would be sufficiently reliable and sensitive to permit the substitution of animal for human subjects in certain hazardous investigations, e.g., effects of exposure to ionizing radiation, certain gases, drugs, and environmental extremes upon performance.

APPARATUS: A five-choice, five-stage, serial multiple discrimination apparatus and method are described which make possible quick and accurate visual threshold determinations at a statistical level of confidence never approached before.

RESULTS: In only five trials and with only five bites of food it is possible to investigate simultaneously five different visual problems at better than the 1% level of confidence for individual rats. If only one

problem was presented for five trials, the probability of getting all correct responses was 3×10^{-17} .

Twenty-one 6-month-old rats discriminated 5 mm. vertical from horizontal striae without additional training. Eight months later 10 of these rats discriminated 1 mm. striae, with a visual angle of $21'$, at the 1% level of confidence. One year later the six remaining rats made 262 correct out of 263 unaided jumps to a .5-mm. single vertical white stripe. They approached the a priori chance level after insertion of the .2-mm. stripe which was below the theoretical limits reported by Lashley.

Matching, multiple choice, brightness reversal, and acuity problems have been demonstrated in a single trial.

CONCLUSIONS: The increased statistical precision of the measurements obtained with the SMVDA together with the extra margin of safety in experimental controls and its increased versatility have greatly extended the range of hazardous situations which may be evaluated with white rats. (Slides)

9:10 A.M. Discrimination learning set in chimpanzees. KEITH J. HAYES, *Yerkes Laboratories of Primate Biology*.

PROBLEM: To determine the speed of learning set acquisition in chimpanzees, and to determine how it is affected by training methods and age.

SUBJECTS: 8 chimpanzees, ranging in age from 15 months to 26 years.

PROCEDURE: Our training method differed from that used by Harlow in that our Ss were permitted to displace both test objects, successively, on each trial. When the first choice was incorrect, a 5-sec. delay was imposed before correction was allowed.

Training of two Ss was begun with a fixed number of trials on each problem—two in one case, ten in the other. The remaining Ss were trained to a criterion on each of their early problems. In the final stage of training, each problem was run for just two trials, for all Ss.

RESULTS: Speed of learning increased rapidly at first, then tended to level off. A typical S achieved 90% second trial accuracy after training on 160 problems, which involved a total of 450 trials.

The early part of training was more efficient when problems were run to criterion. (The S who started at a fixed rate of two trials per problem showed no improvement after 300 problems.) In the later stages of training, two trials per problem proved to be very efficient.

There was no apparent correlation between speed of set acquisition and age over the range of two to 26 years. Our 15-month-old chimpanzee proved impractical to work with, for motivational reasons.

The author is grateful to Robert Thompson and Catherine Hayes for their assistance in this work. (Slides)

9:25 A.M. "Belongingness" influencing simple discrimination learning in primates. MURRAY E.

JARVIK, *Yerkes Laboratories of Primate Biology*.

PROBLEM: Harlow has accurately stated, "The simplest visual discriminations are learned slowly and painfully, even if motivated by shock, in the naive primate." Granting that sophistication does result in improved performance, does it follow that naiveté per se is the crucial factor determining poor initial performance? Can we demonstrate that naiveté is only a necessary and not a sufficient condition for such performance? Would a less artificial situation result in more efficient discrimination behavior? Experienced and naive primates were tested in a simple red-green discrimination, but the relationship between stimulus and reward was presented in an unconventional manner.

SUBJECTS: 10 chimpanzees with varying degrees of experimental experience, one sophisticated rhesus monkey, one naive spider monkey, and three naive rhesus monkeys.

PROCEDURE: Small squares of bread were colored red and green with vegetable dyes. Positive pieces were either flavored with saccharine or unflavored; negative pieces were flavored with quinine, capsaicin, and dehydrocholic acid. (a) All animals were required to discriminate on the basis of color. (b) The three naive monkeys were further tested for transfer to a conventional color discrimination set-up, and to a modified conventional set-up using the same colored breads as in the original training. Finally, colored celluloid plates were pasted on white positive and negative breads.

RESULTS: (a) Most of the animals made no errors in twenty trials, and none made more than three. (b) The three monkeys who were performing perfectly with the bread gave subsequent chance performances on the conventional and modified conventional set-ups. Pasted colored plates resulted in perfect performance again. (Slides)

EXTINCTION

8:40-9:40 A.M., Tuesday, East Room, Mayflower

NEAL E. MILLER, Chairman

8:40 A.M. Effects of punishment in a two-response situation. RUTH PAGE EDWARDS, *University of Maryland Medical School*.

This is an investigation of the effects of punishment upon punished responses and upon available

similar unpunished responses during and after punishment.

The apparatus was a Skinner box with two identical bars projecting from one wall and a food tray in the middle of the opposite wall. The floor was a grill, and each bar could be electrified when depressed. The animals, naive albino rats, were given two weeks of preliminary training in the box, being aperiodically reinforced for responding with one food pellet every $3\frac{1}{2}$ minutes per bar on the average. This schedule resulted in a rate of about 150–180 responses per bar per hour.

Four experimental days followed in which punishment, aperiodic reinforcement, and extinction were applied in various combinations to different groups. The groups were: Group 1, extinguished on both bars; Group 2, regularly punished on both bars; Group 3, simultaneously rewarded on an aperiodic schedule and regularly punished on both bars; Group 4, aperiodically rewarded on one bar and extinguished on the other; Group 5, regularly punished on one bar and extinguished on the other; Group 6, regularly punished on one bar and aperiodically rewarded on the other. For all groups there followed fifteen hours of simple extinction on both bars, one hour per day.

The main results were: treatment on one bar changes the behavior on the other, but the effects are not simple. Both generalization (changes in the same direction as the changes on the punished or rewarded bar) and compensation (changes in the opposite direction) occurred; each occurred with some treatments and not others.

It is concluded that reward and extinction tend to produce generalization from the response to which they are applied to other similar available responses, whereas punishment tends to result in compensation effects. (Slides)

8:55 A.M. Increasing resistance to extinction by decreasing response strength in conditioning. WILLIAM O. JENKINS, *University of Tennessee*.

PROBLEM: These experiments were concerned with a test of the generalization decrement interpretation of partial reinforcement. The hypothesis tested was that the more closely the cue situation in training approaches that in extinction, the greater the resistance to extinction.

SUBJECTS: 24 adult pigeons.

PROCEDURE: Two experiments were conducted in which pigeons were conditioned to peck an illuminated window for food. In each experiment, 12 birds were trained to a stable level of responding under a partial reinforcement schedule at 80 per cent of satiated body weight. The birds were matched into four

sets of three on the basis of conditioning performance, with one member of each set serving as the experimental subject. The responses of the experimental group were then followed by reward only when the birds delayed responding for an interval. The treatment was continued until the birds had learned to pause for several minutes between reinforced responses and were responding less than 5% as frequently as the control birds. No change was introduced in the training procedure for the control groups. A 12-hr. extinction test was then conducted in which frequency of responding in extinction was taken as a percentage of frequency of responding in conditioning.

RESULTS: The experimental groups, as compared with the control groups, continued to respond at a high percentage of their conditioning rate throughout the 12 hours of extinction. In the last four hours of extinction, the experimental birds were responding at about 75% of their conditioning rates as contrasted with less than 5% in the control groups.

CONCLUSIONS: These data are interpreted to mean that the weaker habit in conditioning is the stronger habit in extinction when the experimental treatment operates to reduce generalization decrement by making conditioning like extinction. (Slides)

9:10 A.M. The generalization of extinction of an instrumental response to stimuli varying in the size dimension. J. W. KLING, *Brown University*.

PROBLEM: To investigate the generalization gradients for the effects of extinction of an instrumental response.

SUBJECTS: 8 groups of 11 albino rats each.

PROCEDURE: The Ss were trained to obtain food reinforcement by approaching white metal discs presented one at a time. For each S training involved two such stimulus objects: an "extinction" and a "test" disc. Following 90 original learning trials, the "extinction" disc was presented without food reinforcement until the criterion of extinction (no response on 4 of 5 successive trials) was attained. This extinction procedure was repeated the following day, whereupon the "test" disc was immediately presented. Latency of the first response to the "test" disc was utilized as a measure of the extent to which the effects of the extinction training on one disc generalized to the learned response to the other disc.

Disc areas represented equal log area steps: 20, 32, 50, and 79 sq. cm. Four groups were extinguished on the 20 sq. cm. disc, and tested on the 79, 50, 32, or 20 sq. cm. disc. The remaining 4 groups were extinguished on the 79 sq. cm. disc, and tested similarly.

RESULTS: 1. Based on median latency of response for

each group, two generalization functions were plotted: one representing generalization in the direction of larger areas; the other, generalization in the direction of smaller area.

2. The plotted gradients were, in general, falling and negatively accelerated, intersecting near their midpoint.

3. All groups showed significant amounts of generalized extinction.

4. The functions did not possess the symmetry usually assumed in theoretical gradients.

CONCLUSIONS: The results are interpreted as supporting S-R conceptions of generalization. The departure from symmetry may indicate the greater stimulating effects of the larger disc areas. (Slides)

9:25 A.M. Resistance to extinction following random and alternating partial reinforcement. E. D. LONGENECKER, JOHN I. KRAUSKOPF, and M. E. BITTERMAN, *University of Texas*. (Sponsor, M. E. Bitterman)

With a 5-sec. light serving as the CS, the GSR to brief shock was conditioned in 30 male students. The subjects were divided into two groups (matched for reactivity) both of which were reinforced on 50% of the 22 conditioning trials. Group I was reinforced on *alternate* trials (beginning with the first) while Group II was *randomly* reinforced. During the 30 unreinforced trials which immediately followed the conditioning series, the first group extinguished significantly more rapidly than the second.

On the basis of the stimulus-generalization interpretation of partial reinforcement precisely the opposite results should have been expected, since for the alternate group the hypothetical "after-effects of reinforcement" were absent at the start of each reinforced trial. The results obtained require the assumption of stimulus-patterning over a sequence of trials. (Slides)

DISCRIMINATION LEARNING II

9:50-10:50 A.M., Tuesday, Ballroom, Mayflower

ALVIN M. LIBERMAN, Chairman

9:50 A.M. Number of common elements and consistency of reinforcement in a discrimination learning task. ROBERT STANTON FRENCH, *Human Resources Research Center, Lackland AFB*.

PROBLEM: Using stimuli consisting of closed irregular contours, the hypothesis was tested that the two independent variables: (a) number of common elements, and (b) consistency of reinforcement, interact in their functional relationship to mean latency and error. This hypothesized interaction may be

described as follows: with high consistency of reinforcement, mean latency or error *decreases* with an increase in the number of common elements within an arbitrary aggregate of stimulus units; with low consistency of reinforcement, the opposite occurs: an increase in the number of common elements results in an increase in mean latency or error.

SUBJECTS: 24 subjects were assigned to each of the 16 experimental conditions.

PROCEDURE: The discrimination task was learning to choose the "correct" stimulus form in successively presented pairs of such forms. After each choice the "correct" stimulus form was indicated. The number of identical contour segments was varied from zero to three within different aggregates or series of forms. In such aggregates variation in four degrees was also introduced in the percentage of forms designated "correct" relative to the percentage designated "incorrect." This latter manipulation defines variation in consistency of reinforcement.

RESULTS: The results substantiate the hypothesized interaction at a high level of confidence in terms of an analysis of variance.

CONCLUSIONS: From an analysis into stimulus elements and an application of the principle of stimulus generalization a set of rational functions was derived closely resembling that obtained empirically. The results suggest that any experimental manipulation which varies stimulus generalization within an aggregate of stimulus units might interact with "consistency of reinforcement" in a comparable manner. The formulations of Gibson, Osgood, Gagné, and Melton concerning similarity and transfer effects will be discussed in relation to the implications of the present study. (Slides)

10:05 A.M. The effects of intertrial delays upon the object-quality discrimination performance of normal and brain-operated monkeys. R. A. PATTON, Y. D. KOSKOFF, and ROBERT MILLER, *University of Pittsburgh Medical School and Institute of Research, Montefiore Hospital*.

PROBLEM: To study the effects of three intertrial delay periods upon the efficiency of object-quality learning sets in monkeys.

SUBJECTS: 9 rhesus monkeys with previous test experience were utilized. Three of these animals had frontal lesions involving the bilateral destruction of Area 24.

PROCEDURE: Utilizing the Wisconsin Test Apparatus, monkeys were first trained on object-quality tests, eight problems a day being presented for three trials each. Learning set curves similar to those previously described were obtained. At the beginning of the present tests, the correct choice level of the controls

was 88%, while that of the brain-operated animals was 75%. At this point intertrial delays of 10 seconds were given during 96 additional problems. Following this, 20- and 40-second delays were interposed between trials during two additional blocks of 48 problems each.

RESULTS: A repeated measures design was utilized in comparing delayed performance levels with the object-quality discrimination performance each animal had shown previously. The error scores indicated no significant change in the performance levels of the nine monkeys which could be attributed to the increasing delays interposed between trials. The brain-operated animals, however, made significantly more errors than the controls on the second and third trials of delayed object-quality tests. These differences in performance were found to be significant for the delay periods of 10, 20, and 40 seconds.

CONCLUSIONS: It is concluded that well-established learning sets are not significantly impaired by increasing delay periods between trials. This was also true for brain-operated animals although these monkeys consistently performed at a significantly lower level of efficiency during postoperative tests. The behavioral efficiency of both normal and operated animals provides additional evidence that delayed response tests are not necessarily more difficult or involve higher order functions than other discrimination tests. These results are preliminary to a study of the behavioral effects of Area 24 ablation in the monkey. (Slides)

10:20 A.M. An experimental investigation of the continuity and noncontinuity theories of discrimination learning. JACKSON B. REID, *University of Texas*.

The purpose of this investigation was to derive, in the presence of controls regarded as acceptable by both continuity and noncontinuity theorists, a statement of the conditions under which a given aspect of a stimulus complex will be associated in a discrimination situation.

Thirty-one hooded rats were trained to obtain a food reward by pulling one of two differentially weighted trays along an approach board by means of a string. During this training period incidental cues were present in the form of two interchangeable floor panels of different brightnesses, but they were varied randomly, each accompanying the positive weight cue in half the trials. When the weight discrimination had been mastered and, thereby, a "set" to react on the basis of weights presumably established, each animal was given thirty overlearning trials during which the originally positive weight cue continued to be rewarded. Now, however, one

or the other of the brightness cues consistently accompanied the positive weight cue in all trials. Upon completion of the overlearning period the weight differential was eliminated, and the animals were required to learn to obtain the reward on the basis of brightness cues alone. A "nonreversed" group was trained to the brightness cue that had previously accompanied the positive weight cue, and a "reversed" group was trained to the brightness cue that had previously accompanied the negative weight cue.

Comparative error scores indicated superior performance by the nonreversed group, particularly in early trials, yet the two groups mastered the discrimination problem in approximately the same number of trials. Neither the continuity nor the noncontinuity theory adequately accounts for such results without certain revisions. The findings are probably best embraced by a theory including the concept of "acquired distinctiveness of cues." In addition, some possible sources of conflicting results in previous studies were revealed.

10:35 A.M. Compound and configuration in successive discrimination. JEROME WODINSKY and M. E. BITTERMAN, *University of Texas*. (Sponsor, M. E. Bitterman)

In a gray, three-window jumping apparatus, the solution of two problems involving the same stimulus-cards (black, white, and striped) was studied. Rats of Group I were reinforced for jumping to one of the windows when three white cards were presented, to a second window when three black cards were presented, and to a third window when three striped cards appeared (e.g., *WWW*, *BBB*, *SSS*, where the positive card is italicized). Group II was rewarded for responding to identical card-position compounds but the cards were arranged differently (e.g., *BSW*, *WBS*, *SWB*). The punished card-position compounds also were identical in the two problems. When each animal reached criterion on its problem, it was trained on the problem of the other group.

The following results demonstrated that the two problems were not functionally equivalent: (a) The second problem was mastered more rapidly than the first. (b) There was more transfer from the second problem to the first than from the first to the second, and in both cases transfer was far from complete (initial responses were about 60% correct as compared with a chance level of 33%).

Since the two problems involved identical compounds, these results cannot fully be understood in terms of the principle of compounding. The discrimination of compounds is at least in part a function of the configurations in which they appear. (Slides)

LEARNING

9:50-10:50 A.M., Tuesday, East Room, Mayflower

BENTON J. UNDERWOOD, Chairman

9:50 A.M. Overt errors as a measure of generalization. EUGENIA B. NORRIS and MALCOLM D. ARNOULT, *Human Resources Research Center, Lackland AFB.*

PROBLEM: Gibson has proposed that generalization will increase to a maximum during the early stages of practice after which it will decrease as practice is continued. (She has used as a measure of generalization the number of overt errors, where omissions are allowed.) The present study was designed to test this hypothesis.

PROCEDURE: Three groups (60 male Ss each) were run. Their task was to pair each of 5 angular figures with one of five letters (F, H, K, M, V). Twenty trials were given. A memory drum with two windows was used. The stimulus appeared on the left and the response on the right. The S responded by pressing one of five keys labeled with the response letters. Latency was measured as the time from the opening of the stimulus window to the making of the response. A method of anticipation and immediate correction was used. The procedures for the three were as follows:

Group I. Required to make a response in two seconds. Omissions were allowed.

Group II. Required to make a response in two seconds. No omissions were allowed.

Group III. No time limit on the response. No omissions were allowed.

RESULTS: In terms of mean overt errors, there was a significant increase during the initial trials only for Group I. However, when the overt errors for Group I are evaluated as the proportion of the total responses made, there is no significant increase in the proportion of errors over the first ten trials. The learning curves indicate that Group III learned the task better than Groups I and II.

CONCLUSIONS: On the basis of these results it is concluded that the increase in "generalization" that Gibson found may have been an artifact of the procedure and the error measure used to indicate generalization. (Slides)

10:05 A.M. An experimental analysis of a mechanism of transfer mediating a gradient of avoidance under nonreinforcement conditions. EDWARD R. STRAIN, *Veterans Administration Hospital, Roanoke, Virginia.* (Sponsor, Karl Zener)

The present experiment constitutes a test of the hypothesis that transfer of learned avoidance behavior

may be mediated by indirect activation of memory traces under conditions which preclude explanation in terms of stimulus generalization, fractional anticipatory goal responses, or delay of reinforcement. The functional relationship between the magnitude of this transfer effect and directness of trace connection was also investigated.

Four groups of twenty rats each were given six daily nonreinforced exploration trials in a runway divided by doors into six, perceptually distinct, compartments. After training each animal was introduced directly into one end compartment, shocked, and removed. After fifteen minutes it was reintroduced into one runway compartment. Twenty animals were introduced into each of the four middle compartments. Initial direction of exit from these compartments, and other behavior occurring during the two and one-half minute test period, were recorded.

Statistically significant evidence of transfer of avoidance behavior as indicated by initial direction of exit was obtained. Controls indicate the inapplicability of the alternative explanatory principles mentioned above.

The hypothesis that the magnitude of the transfer effect is a positive function of the directness of connection between the compartment perceived on test and the end shock compartment (and between the corresponding traces) was confirmed by the differential avoidance behavior of the experimental groups.

Further evidence of avoidance gradients was yielded by analyses of the following: (a) distance traversed in initial run up or down the runway, (b) percentage of animals entering the different compartments, and (c) the total cumulative time spent in each of the six compartments during test.

The significance of the transfer mechanism tested and of the effect of the degree of directness of memory trace connection are discussed generally, and more specifically in relation to the development of approach and avoidance gradients. (Slides)

10:20 A.M. Response strength as a function of conditioned stimulus intensity. W. KESSEN, *Yale University.* (Sponsor, Gregory A. Kimble)

PROBLEM: In *Essentials of Behavior*, Hull postulated a relation between stimulus intensity and response strength. This experiment was designed to test some consequences of this assumption.

SUBJECTS: 10 male albino rats (90-120 days old) were used as subjects.

PROCEDURE: The animals were trained to avoid an electric shock by turning a wheel to a light signal preceding shock by 5.8 seconds. This light was varied in intensity by using six light bulbs (from 6 to 300 watts) as conditioned stimuli. Every rat was given

eleven trials to every light, these trials being arranged in an order such that (after six preliminary trials) each conditioned stimulus (light) was preceded and followed by every other light once and only once. Number of avoidance responses, latency of responses, and number of wheel-turns per trial were recorded.

RESULTS: The intensity of the conditioned stimulus was significantly and directly related to: number of avoidance responses (p less than .005); speed of responses, that is, reciprocal latency (p less than .01); and wheel-turns per unit time (p less than .05). The avoidance response and speed of response measures correlated highly (+.864), but neither correlated highly with wheel-turns per unit time (+.301 with number of avoidance responses, +.326 with speed of response). The relation between stimulus intensity and number of avoidance responses was negatively accelerated and increasing, as Hull predicts.

CONCLUSIONS: It is concluded that conditioned stimulus intensity bears a statistically significant relation to three response measures in an experiment in which rats were trained to avoid an electric shock. (Slides)

10:35 A.M. A description of avoidance learning.

GREGORY A. KIMBLE, *Yale University*.

PROBLEM: The main purpose of this report is to present some of the details of behavior typical of avoidance learning. Specifically it deals with an analysis of four response measures available in the wheel-turning, shock-avoidance experiment. A secondary purpose is to present further evidence on the relation of conditioning to conditioned stimulus intensity.

SUBJECTS: 32 male albino rats.

PROCEDURE: The apparatus and general method are the same as in the previous report by Dr. Kessen. In this experiment, however, the animals were conditioned to one of four single intensities of light and extinguished.

RESULTS: This experiment confirms the results reported by Kessen, that learning varies with conditioned stimulus intensity. But, of greater interest are the details of behavior revealed by an examination of the various response measures which yields the following facts: As learning progresses, number of conditioned responses increases. But there is little or no systematic change in the latency of these responses. The magnitude of the response (number of wheel turns per unit time) decreases. A typical behavior sequence involves a sudden shift from an escape response to a short-latency conditioned response. Behavior in extinction is similar; but the change in behavior is a sudden cessation of responding. Frequency distributions of conditioned response latencies

are almost identical whether they are obtained early or late in training or in extinction.

CONCLUSIONS: The behavior observed in this experiment supports an interpretation which postulates a switching or threshold mechanism as one of the processes necessary to account for avoidance learning. The specific process involved seems to be one by which to-be-learned responses are put into competition with other on-going behavior at the occurrence of the conditioned stimulus. And these results seem to be most easily handled by Hull's theory about the effect of competing reaction potentials. (Slides)

SYMBOLIC PROCESSES

11:00-12:00 M., Tuesday, Ballroom, Mayflower

WENDELL R. GARNER, Chairman

11:00 A.M. The effects of differences in expected value on gambling behavior. WARD EDWARDS, *Johns Hopkins University*.

Previous experiments have shown that stable, reproducible preferences exist among bets of like expected value (EV). These results were interpreted as preferences among the different probabilities involved. An alternative explanation uses the concept of utility and assumes that such preferences result from the nonlinear relation between subjective and objective values of money. The experiments reported here test this hypothesis.

Twenty-four undergraduates were required to choose several times among bets arranged according to the method of paired comparisons. All bets referred to rolls on a pinball machine, which, unknown to the subjects, were completely controlled by electromagnets and a programmer. After each choice, the subject rolled the pinball machine. If he won, he was paid. If he lost, he paid the experimenter from his own funds.

There were ten groups of bets, each group at a different EV level from the other groups. Within seven of these groups there were no differences in EV; within the other three there were small differences in EV from one bet to another. Within each group there were wide differences in probability and amount of winning or loss among bets.

Results were: (a) the pattern of probability preferences discovered earlier was confirmed, (b) when there is a difference in EV among bets, choices represent a compromise between probability preferences and the desire for maximum money returns, (c) when bets of constant EV are compared with similar bets at different EV levels, the pattern of choices is generally the same.

It is concluded that gambling behavior in this kind of experiment is controlled primarily by probability preferences (when the differences in EV between alternatives are slight or absent), and only secondarily by differences in utility of money. This interpretation, if correct, requires revision of von Neumann and Morgenstern's program for measuring utility. (Slides)

11:15 A.M. The influence of past experience on concept formation. HOWARD H. KENDLER and ROBERT VINEBERG, *New York University*.

This experiment was one of several designed to investigate the relationship between conditioning principles and thinking behavior. The specific problem investigated was to determine what influence the learning of "simple" concepts had upon the learning of "compound" concepts; the hypothesis being that training initially to respond to a "simple" concept would facilitate the learning of "compound" concepts based upon simpler concepts.

A sorting problem involving cards varying in terms of form (circle, crescent, square, and triangle), color (black, gray, yellow, and orange) and size (large and small) was used. This deck of cards could be divided into two categories in four different ways: small vs. large (Concept A), curved line vs. straight line forms (Concept B), chromatic vs. achromatic (Concept X), and "part" forms vs. "whole" forms (Concept Y). Initially, the Ss (36 college students) learned two simple concepts by sorting the cards in relation to two stimulus cards: a large yellow crescent or a small black square. Group 1 first learned Concept A and then B. Group 2 learned Concept A initially and then Y, while Group 3 learned Concept X and then Y. The test problem was to sort the cards into four categories represented by four stimulus cards (large yellow crescent, small black square, large gray triangle, small orange circle). The correct response was to sort the cards in relation to the compound concept of A + B.

Groups 1, 2, and 3 solved the test problem in 25.7, 40.7 and 91.7 trials respectively. One of these differences was significant at the .05 level while the other two were significant at the .01 level. The results of a similar experiment ($N = 33$) with a test problem involving the learning of a compound concept of $X + Y$ found the order of learning for the three groups reversed.

These results are interpreted to be consistent with conditioning principles and they are discussed in relation to both methodological and theoretical problems of "fitting" conditioning theory to thinking behavior.

(This experiment was performed in connection with Project NR 150-064, under Contract NONR-

187(00) between the Office of Naval Research and New York University.) (Slides)

11:30 A.M. The influence of concreteness and accessibility on concept-thinking. LORRAINE NADELMAN, *Mount Holyoke College*.

PROBLEM: Heidbreder has maintained that the order of dominance in cognitive reactions is (a) perception of concrete objects, (b) spatial perception, (c) conceptual reactions. Conflicting results in this field have been difficult to reconcile. This may be due partly to the varying stimuli and presentation-techniques. What changes occur in the theoretical sequence and in concept-thinking when the "same" stimuli are presented with variations in their "concreteness" (three-dimensional models vs. drawings) and in their "accessibility" (serial vs. a more comprehensive presentation)?

SUBJECTS: Four groups, each 12 males and 12 females, randomly chosen from a controlled sample of NYU freshmen: no psychology, ACE percentile above 50, high-school grades above 80.

PROCEDURE: Nine concepts were used: objects (buckles, furniture, mark-makers), forms (O, V, ++), numbers (2, 5, many), each appearing once in each of 16 series. Half the subjects worked with three-dimensional items, half with ink drawings of these. Half had the usual serial method (Heidbreder); with half, a series was presented in toto and remained in sight when the next series was presented. The groups, therefore, were: A—models, comprehensive method; B—drawings, comprehensive; C—models, serial method; D—drawings, serial. Definitions and multiple-choice tests followed (immediately and 24 hours later), plus terminal interviews. First Correct Anticipations, Concept Attained (computed 3 ways), Prompts During First Series, Prompts During Remaining Series, etc., were found for individual subjects and concepts.

RESULTS: Applications of $2 \times 2 \times 2$ analyses of variance to each concept for each score, and repeated-measurement analyses for each group of subjects similarly, indicated that the experimental variables, concreteness and accessibility, did affect concept-thinking. However, the specific effects differed depending on (a) the kinds of concepts considered, and (b) which scoring data were being utilized. Implications for current methodology and theory in this field will be pursued. (Slides)

11:45 A.M. Guessing sequences using two, four, and eight alternatives. EDWIN B. NEWMAN and NANCY COLLIER, *Harvard University*. (Sponsor, Edwin B. Newman)

It is well known that the successive guesses of a subject who believes he is behaving randomly are usually far from independent. In this study we undertook to discover whether the sequential dependencies which can be found in such guessing extended over chains of various length when the subject was using from two to eight alternatives. It was our hypothesis that longer sequences would occur with fewer alternatives because of the greater ease with which such sequences could be remembered.

Ten subjects played a game in which they tried to out-guess a random sequence in the experimenter's hands. The whole set for each subject contained 1,000 1's and 2's; 1,000 1's, 2's, 3's, and 4's; and 1,000 1's, 2's, 3's, 4's, 5's, 6's, 7's, and 8's. All sequences of 2's to five steps, of 4's to five steps, and of 8's to three steps were tabulated. The "certainty" values and a "coefficient of constraint" were computed for the various tables.

The results show that the subjects quite systematically equalized short sequences of 1's and 2's but between the third and fifth steps they all showed some kind of patterning. When they used more numbers, they tended to exhaust systematically the entire set of numbers before starting again. This tendency produces very marked deviations from "chance" in the choices of sequences of three or four numbers. Just how far this tendency operated with the longest chains with eight numbers is still beyond our capacity to tabulate and analyze, but some tentative results can be reported. Our original hypothesis turns out to be a bit too simple for all of the results obtained. (Slides)

SECONDARY MOTIVATION

11:00-12:00 M., Tuesday, East Room, Mayflower

WILLIAM S. VERPLANCK, Chairman

11:00 A.M. Secondary motivation through classical conditioning: one trial nonmotor learning in the white rat. JOHN A. BARLOW, *Duke University*.

PROBLEM: To determine the effect of an association of a stimulus with electric shock on the later motivational properties of this stimulus when the stimulus occurred (a) before, (b) during, (c) after the shock.

SUBJECTS: 100 male albino rats, 100 to 130 days old.

PROCEDURE: 1. Conditioned stimulus. Two procedures were followed for each of the 10 experimental-test sequences: for half of the rats the occurrence of an electric light stimulus served as the conditioned stimulus or "signal"; for the other half of the animals the light was "on" when the rat was put into the apparatus on training day and its temporary termination served as the "signal."

2. Training: There were five training procedures: (a) 5-sec. signal immediately followed by 10-sec. shock; (b) 10-sec. shock with signal occurring during last 5 sec.; (c) 10-sec. shock immediately followed by 5-sec. signal; (d) 10-sec. shock only; (e) no shock.

3. Test 20 hours after training: There were two test procedures for each training group. (a) The appropriate signal (either "light" or "darkness") occurred for half of the rats for however long the animal contacted a bar $3\frac{1}{4}$ inches above the floor with any of its extremities. (b) For the other half of the animals the signal illumination was present when the animal was put into the apparatus on test day. For these rats contact with the bar terminated the signal. RESULTS: Group A: Total group duration of response was greater when response terminated the signal ($p, .01$).

Group B: Total group duration of response was greater when response resulted in occurrence of the signal (difference not significant).

Group C: Total group duration of response was greater when response resulted in occurrence of the signal ($p, 10 .01$).

Results for Groups D and E indicate that there was no pseudo-conditioning.

11:15 A.M. The relationship between amount of primary reward and strength of a secondary reward. REED LAWSON, *University of Missouri*. (Sponsor, Melvin H. Marx)

PROBLEM: Is secondary reward strength, as measured by the effect of secondary reward stimuli on resistance to extinction, related to the amount of primary reward with which the stimuli have been associated?

SUBJECTS: 64 male albino rats.

PROCEDURE: The response measured was running time between opening of starting door and passage through a second door 4 ft. down a straight alley runway. Animals were run under 22 hr. hunger drive. On the first training day animals received 6 massed rewarded trials. For the next 4 days animals received 6 rewarded trials randomly interspersed with 4 nonrewarded trials spaced 7 minutes apart. Thirty-two animals received four 30-mgm. food pellets on each rewarded trial (HR) and 32 got one such pellet (LR) in a glass food cup in a white end box. On nonrewarded trials a black box was in place. Animals in each reward group were then subdivided into groups of 16 and given 30 massed extinction trials. SR animals found the white end box and a clean food cup and NoSR animals found an unfamiliar black-and-white striped end box.

RESULTS: Training-day running times showed HR animals to have significantly greater response strength

than LR animals. An extinction score for each animal was obtained by counting the number of trials on which its running time was at or below the median running time for all animals during extinction. A 2×2 analysis of variance was applied. Since the groups were not homogeneous in weight and weight was significantly correlated with the extinction scores, a covariance correction was necessary. The only significant difference obtained was between SR and NoSR groups.

CONCLUSIONS: Within the limits tested, there is no evidence that secondary reward stimuli associated with different amounts of primary reward have a differential effect on resistance to extinction. (Slides)

11:30 A.M. Secondary reinforcement and partial reinforcement. E. F. MACCASLIN, W. FEDDERSON, and M. E. BITTERMAN, *University of Texas*. (Sponsor, M. E. Bitterman)

Three experiments were performed to explore the development of secondary reinforcement under conditions of partial reinforcement. Hungry rats were trained to run down a gray alley and jump a gap to an unfastened black-and-white striped card which admitted them to a food box. The interior of the box, which could not be seen until after the terminal response, was either black or white.

Experiment I (control). The animals were given 5 rewarded trials per day for eight days with a goal box of one color. Half the animals were then extinguished on the reinforced color and half on the opposite color.

Experiment II. The animals were given 10 trials per day for eight days with a goal box of one color under conditions of 50% random reinforcement. Half were then extinguished on the reinforced color and half on the opposite color.

Experiment III. This experiment was the same as the second except that during training one goal box color was used on reinforced trials and the other on nonreinforced trials. During extinction one group found the previously reinforced color, a second the previously nonreinforced color, and a third both colors randomly alternated from trial to trial.

Results. The control experiment gave conventional secondary reinforcement results. In the second experiment the group run to the previously reinforced color extinguished significantly more rapidly. In the third experiment there were no significant differences among the three groups.

Before the concept of secondary reinforcement is invoked to explain the effects of partial reinforcement, further study of partial secondary reinforcement is required. (Slides)

11:45 A.M. Rotary pursuit performance as related to conditions of click reinforcement. BRADLEY REYNOLDS and JACK A. ADAMS, *Human Resources Research Center, Lackland AFB*.

PROBLEM: It has been observed that when Ss trained on the rotary pursuit are presented with a click each time they remain on target continuously for 1 sec. their performance is significantly better than Ss who receive no click. In this study the duration of continuous on-target time required of the subject was varied.

SUBJECT: 178 basic airmen trainees at Lackland AFB. **PROCEDURE:** There were five experimental groups for the following continuous times on target: .10, .20, .50, 1.0, 2.0 sec., and a no click control group.

The Ss were given fifty 30-sec. trials with 15-sec. intertrial rests, followed by five trials with click removed, and then five trials with click for .5-sec. continuous on-target time for all groups except the control group.

RESULTS: At the end of 50 trials all experimental groups were significantly better than the control group. The experimental groups differed significantly among themselves. The rank order of the experimental groups was .50, .10, .20, 1.0, 2.0 sec.

In the five trials without click the experimental groups were still superior to the control group, but did not differ significantly among themselves. When click was reinstated experimental groups were significantly better than the control group, and differed significantly among themselves.

CONCLUSIONS: The study verified previous findings that click reinforcement for continuous time on target yields superior performance over a no click group. It was shown that the duration of the continuous on-target period required for click presentation is a relevant variable, an intermediate value giving best performance. This suggests that click reinforcement is associated with greater habit strength for the responses learned. (Slides)

VERBAL LEARNING

1:40-2:40 P.M., Tuesday, Ballroom, Mayflower

DONALD M. JOHNSON, Chairman

1:40 P.M. Further gradients of error reinforcement following repeated reinforced responses. MELVIN H. MARX and FELIX E. GOODSON, *University of Missouri*. (Sponsor, Melvin H. Marx)

PROBLEM: To test the hypothesis that errors are differentially strengthened as a positive function of their nearness to repeated reinforced responses.

SUBJECTS: 214 5th and 6th grade public school students.

PROCEDURE: Subjects in small groups were given a typical Thorndikian learning problem utilizing multiple-choice punch-board boxes. They were instructed to punch one dot in a row of 12 for each of 27 words called out by the experimenter and to remember and repeat the correct responses. These were indicated by the passing through of the stylus to the hilt. The 102 experimental Ss were reinforced, according to a prearranged pattern, on either (a) the 14th, (b) 5th and 23rd, or (c) the 5th, 14th, and 23rd responses. The 112 control Ss received no reinforcement in the 2 trials analyzed but repeated at least one nonreinforced response from the 5th to the 23rd response on the second trial. Response strength was measured by the mean 1st to 2nd trial variation, in terms of linear distance on the record sheet.

RESULTS: 1. Marked after-gradients occurred following each of the 3 reinforcement positions. No consistent fore-gradients appeared.

2. The experimental gradient following the first repetition of a reinforced response was significant. A statistically nonsignificant after-gradient occurred following the first chance repetition of nonreinforced responses in the control group. A direct comparison of this curve and the corresponding experimental curve showed them to be significantly different.

CONCLUSIONS: With guessing-sequence and probability-bias factors controlled, the results offer confirmation of earlier positive results obtained under different experimental conditions and thus further support a modified spread-of-effect hypothesis.

This research was supported in part by the United States Air Force under Contract AF 33(038)-25631, monitored by the Human Resources Research Center. (Slides)

1:55 P.M. Intralist-interlist relations in verbal learning. R. C. MILES and D. R. MEYER, *Ohio State University*.

This experiment investigates the changes which take place in curves for the learning of nonsense syllable lists when practice is given with a series of equivalent lists.

The Ss were 64 college students. They learned lists of 12 syllables each, designed by Melton to give a minimum of interlist interference. The lists were reproduced on alternate pages of booklets which also contained blank pages for recall. Each of 20 different lists was practiced for five trials. The methods of whole presentation and reproduction were employed.

Mean performance per list increased as a function

of interlist practice at the expected negatively accelerated rate. Detailed analysis was made of learning curves for four lists which appeared at representative points in interlist learning. Curves were fitted to four sets of points by the method of orthogonal polynomials, and the resulting coefficients were also used to estimate the constants for fitted positive growth functions.

Tests revealed that curves for intralist nonsense syllable learning do not vary significantly in rate as a function of interlist practice, nor is there evidence for the appearance of marked discontinuities. Apparently the principal change is a progressive rise in the upper limit. Thus the amount of nonsense material that can be learned seems to be a function of the amount that has been learned. (Slides)

2:10 P.M. The bowed serial learning curve. ELI SALTZ, *Human Resources Research Center*.

The present experiment attempts to provide evidence for a theoretical explanation of the shape of the typical bowed serial learning curve. The prediction is made, on the basis of the theoretical model, that after one presentation of the serial list the frequency distribution of the occurrence of each list item as an incorrect response to other items in the list, when plotted against the serial position of the incorrect responses, will be identical in shape with the typical bowed serial learning curve.

Thirty-five airmen assigned to Human Resources Research Center were used as Ss. Each S received one presentation of a serial list. Next each S was presented the nonsense syllables in random order and was asked to give the first list item that came to mind upon seeing each syllable.

The frequency of occurrence of each item as an incorrect response, when plotted as a function of the serial position of the item, yielded a curve that corresponded significantly to the typical serial learning curve. These results sustain the theoretical analysis.

2:25 P.M. The learning and retention of serial nonsense lists as a function of distributed practice and intralist similarity. BENTON J. UNDERWOOD, *Northwestern University*.

PROBLEM: Varying intralist similarity is one technique for changing difficulty of material. Using other methods of varying difficulty it has been found that the more difficult the material the more likely it is that distributed practice will facilitate learning. The present experiments test this generalization when intralist similarity is manipulated to change difficulty. A second purpose of the study is to check the adequacy of generalization and inhibition theories for ac-

counting for retention following distributed and massed practice.

PROCEDURE: Three experiments were performed in which serial nonsense lists were presented at a 2-sec. rate on a memory drum. The three experiments differed only in the level of similarity of the lists used. Similarity was varied in terms of number of letters used to form all items within a list, with the fewer the letters the greater the similarity. Within each experiment three intertrial intervals were used, namely 2, 30 and 60 sec. Thirty-six Ss in each experiment went through the three conditions in counterbalanced order. Retention of each list was measured after 24 hr.

RESULTS: (a) The two distributed conditions produced more rapid learning in each experiment than did the massed condition. (b) Interaction between intertrial interval and similarity was not significant, indicating that difficulty may be increased by increasing intralist similarity without finding a corresponding increase in facilitation by distribution. (c) Retention, measured either by recall or relearning, was better following massed practice than following distribution in all three experiments. (d) Recall did not vary as a function of similarity, but relearning did. (Slides)

INFORMATION THEORY

2:50-3:50 P.M., Tuesday, Williamsburg Room,
Mayflower

GEORGE A. MILLER, Chairman

2:50 P.M. Information transmission in a tracking task. LAWRENCE T. ALEXANDER and W. R. GARNER, *Johns Hopkins University*.

PROBLEM: To determine the feasibility and potential value of using concepts from information theory in the analysis of linear tracking behavior.

SUBJECTS: 1 adult male.

PROCEDURE: Targets were drawn on a continuous paper roll and displayed to S behind a narrow horizontal slit. Targets could appear only at predetermined discrete positions, and the number of such positions was varied for different experiments. In addition, targets were presented at three different speeds. The data were analyzed in terms of information transmitted per unit time.

RESULTS AND CONCLUSIONS: A thorough analysis of these data demonstrates clearly that information theory concepts can be useful in the study of tracking behavior. In particular:

1. Average time lag can be measured by determining that lag which produces the maximum infor-

mation transmission. For these data, time lag thus measured increased with increased speed of information input, but was independent of number of possible stimulus positions.

2. Within certain limits, information transmission per presented stimulus can be independent of the number of possible stimulus positions. Thus discrete position displays may be used in tracking experiments with no loss in accuracy.

3. Rate of information transmission reaches a maximum value which is not exceeded with further increases in rate of information input. Thus limits can be found within which changes in speed of target will not affect accuracy of tracking. (Slides)

3:05 P.M. The rate of handling information: Key pressing responses to patterns of flashing lights. E. T. KLEMMER and P. F. MULLER, JR., *Human Resources Research Laboratories, Bolling AFB*. (Sponsor, E. T. Klemmer)

PROBLEM: To determine the rate at which the human can transmit information under one condition of encoding.

SUBJECTS: Laboratory personnel.

PROCEDURE: Five white lights were arranged in an arc in front of five telegraph keys placed one under each finger of the S's preferred hand. The lights were programmed by a teletype tape which allowed any combination of lights in any sequence. A one-to-one correspondence between lights and fingers was established.

The three independent variables were: (a) The possible number of light positions, (b) The number(s) of bulbs illuminated simultaneously, (c) The rate of presentation. The results were analyzed in terms of the amount of information presented and transmitted.

RESULTS: 1. Trained Ss followed all patterns of lights at one per second almost perfectly; from one bit per second (2 alternatives) to five bits per second (32 alternatives).

2. In all tests the information successfully transmitted by the subject in *bits per second* increased with the speed of presentation to a maximum and then decreased. In all cases the maximum occurred between 1 and 4 cycles per second.

3. The maximum information received per second was directly related to the number of possible positions. At this maximum, the speed in cycles per second was inversely related to the number of possible positions.

4. Restricting the number of alternatives by restricting either the number of possible positions or the number of bulbs simultaneously illuminated re-

duced the maximum rate of information transmission. (Slides)

3:20 P.M. An informational analysis of serial position effects in immediate recall. I. POLLACK, *Human Resources Research Laboratories, Bolling AFB.*

PROBLEM: In the immediate recall of a given message, fewer errors are obtained near the ends than near the middle of the message. Quantitatively, however, how much additional information is gained about a given set of immediate recall responses when a detailed serial position analysis of the responses is performed? In an attempt to answer this question, a serial position analysis for immediate recall was made in terms of measures derived from the theory of information.

SUBJECTS: 25 undergraduate students.

PROCEDURE: Messages, constructed of randomly selected English consonants and numerals, were presented to the subjects. The independent variables were the length of the message (range: 4 to 24) and the number of equally-likely alternatives possible per message unit (range: 2 to 30). From successive reproductions of each message, the uncertainty (an informational measure of error) for each position of the message was calculated to yield the required serial position curve.

RESULTS: 1. The shape of the serial position curve for immediate recall (in informational terms) is primarily a function of the length of the reproduced message and is, approximately, independent of the number of possible alternatives available for each message-unit.

2. As the length of the message is increased, the serial position curve systematically changes from positive to negative skewness with a corresponding shift in the maximum uncertainty.

3. The primary effect of the position analysis is associated with messages of intermediate length (about 14 message-units long). With longer and shorter messages, less information is gained by utilizing the position analysis.

4. The additional reduction in uncertainty that results when the serial position analysis is utilized is about 20% of that obtained when the position analysis is ignored. (Slides)

3:35 P.M. How little we say. W. H. SUMBY and F. C. FRICK, *Human Resources Research Laboratories, Bolling AFB.* (Sponsor, F. C. Frick)

It is a commonly accepted fact that the amount of information transferred by any sample of discourse is not simply related to the number of words spoken. Recent developments in information theory have suggested techniques for measuring how much informa-

tion is transferred and have also given us the estimate that ordinary written English is about 60% redundant.

This estimate is probably too low for spoken English. In this case, in addition to the redundancy attributable to linguistic constraints there is considerable redundancy that grows out of the situation in which the speaker finds himself. We usually do not discuss psychology at baseball games. The physical situation and the audience limit the vocabulary, sentence structure, and subject matter, increasing the predictability of what will be said and decreasing the informational content of what is said.

In order to estimate the effects of these restrictions an informational analysis has been made of the "sub-language" used in the control of aircraft by Air Force control tower operators. The vocabulary and subject matter of this language are restricted and experimental measurement sets the redundancy at about 70%.

When the situational context is taken into account, however, control tower messages turn out to be about 90% redundant. This additional redundancy can be attributed to the pilot's knowledge of the situation and the standardization of voice and operating procedures.

The method of analysis will be presented and it is suggested that the techniques employed may be applied in other situations and eventually to a more adequate estimate of how little we say—on the average. (Slides)

HUMAN LEARNING

2:50-3:50 P.M., Tuesday, Ballroom, Mayflower

WILLIAM O. JENKINS, Chairman

2:50 P.M. Anxiety-reduction and stress in verbal learning. JAMES W. KEENAN, JAMES DEESE, and RICHARD S. LAZARUS, *Johns Hopkins University.* (Sponsors, James Deese and Richard S. Lazarus)

This study was designed to explore the relationships between certain problems in experimentally-induced stress and some recent findings on human conditioning and anxiety. Forty-five Ss were selected from a large population on the basis of extreme scores on a neuroticism inventory. This inventory shows a very high correlation with the Iowa Anxiety Questionnaire. These subjects practiced for twelve trials a list of 12 consonant nonsense syllables by the method of anticipation. Three experimental conditions were used: (a) Ss were shocked for incorrect responses. (b) Ss were shocked at random (for both correct and incorrect responses). The number of

shocks per *S* in this condition was equated with the number of shocks per person in the previous condition. (c) A control condition utilized no shock during learning.

In the anxiety-reducing situation (shock for incorrect responses) there was a large difference in the learning curves for the anxious and non-anxious groups. This finding is in accord with Taylor's study of the conditioned eyelid response. No differences were found between anxious and non-anxious subjects in the random shock and control conditions. These findings suggest that the only condition of stress which allows differentiation of anxious and non-anxious individuals through performance is one that permits anxiety-reduction. Conditions of stress that do not allow anxiety-reduction show no such differentiation. This hypothesis is in accord with previous observations by the authors and other experimenters. These findings also suggest a new interpretation of anxiety as a drive in learning and performance.

This research is a portion of the work performed under contract with the Perceptual and Motor Skills Laboratory of the Human Resources Research Center, Lackland Air Force Base. (Slides)

3:05 P.M. The effect of verbalization during observation of stimulus objects upon accuracy of recognition and recall. KENNETH H. KURTZ and CARL I. HOVLAND, *Yale University*. (Sponsor, Carl I. Hovland)

Bartlett reports data suggesting that *Ss* who verbalize spontaneously at the time of initial observation of visually perceived material recall certain aspects of the material more accurately than nonverbalizers. The purpose of the present study was to determine whether the same effect could be produced by experimentally introduced verbalization, and to analyze the comparative improvement on verbal and nonverbal measures of retention.

Seventy-two elementary school children were shown an array of 16 familiar objects. The "verbalization" group was given a sheet containing the names of the objects and was instructed to find, encircle, and pronounce the names as the experimenter pointed one at a time to the actual objects. Under control ("non-verbalization") conditions a photograph of the array of objects was substituted for the sheet of names and the *Ss* encircled the picture of each object indicated by the experimenter. In neither group were the *Ss* led to expect later tests of retention.

A week later, recall and recognition tests were administered. Both visual and verbal forms of the recognition test were employed, half of the test given

each *S* consisting of photographs of the test items and the remaining half of printed names. The visual and verbal halves were presented in counterbalanced order.

Results showed that (a) the verbalization group recalled significantly more of the original objects and made significantly fewer false responses than the control group; (b) the improvement due to verbalization was specific to verbal recognition—the verbal group performed significantly better than the control group on the verbal form of the test, but the two groups did not differ significantly on the visual form.

The study was done in conjunction with the Yale Attitude Change Project. (Slides)

3:20 P.M. Reminiscence in paired associates learning. DONALD A. RILEY, *University of California, Berkeley*.

PROBLEM: One interpretation of reminiscence is that wrong responses to a stimulus are forgotten more rapidly than the stronger right response. Failure to obtain reminiscence with paired associates is assumed to occur because wrong responses are too weak to compete as a result of the changing presentation order. In this study, groups which received pre-training on wrong responses to the stimulus terms and groups which received training on correct responses only are compared with respect to reminiscence.

SUBJECTS: 80 University of California elementary psychology students.

PROCEDURE: In Exp. I, eight pairs of nonsense syllables were presented in different orders for four trials on a memory drum. On the fifth trial, all of the response terms were replaced with dissimilar syllables, and after six trials with the new correct syllables 2 min. of color naming was introduced in the experimental group, while the control group rested 8 sec. as between all other trials. The *Ss*, matched on performance on the six trials preceding the rest interval, then continued to one perfect recitation. Exp. II was the same except that the four trials with the wrong responses were eliminated.

RESULTS: As Exp. I was difficult, many *Ss* did not reach the criterion, but all learned to 5 out of 8. To that point, measurement of trials to successive syllable criteria shows an increasing superiority of the rest group over the control group with every successive criterion. In Exp. II the differences are in the opposite direction, the difference between the two sets of differences being statistically significant. Corresponding differences are found when the data are analysed in terms of number of correct responses on trials following the rest interval. These results support the hypothesis under test. (Slides)

3:35 P.M. A non-effect empirical baseline for human multiple-choice experiments. G. RAYMOND STONE, *Human Resources Research Center, Hamilton AFB.*

The typical Thorndikian serial multiple-choice experiment has produced results the interpretations of which have been confounded for lack of a proper baseline from which to compute the strengthening or weakening of S-R connections. Several empirical baselines have been offered, notably by Tilton, Stephens, and Stone, but none of these has been considered adequate.

A total of 313 college student Ss has contributed data to three experiments involving non-incentive conditions. In all cases, Ss were asked to choose a number between one and ten in response to stimulus words. In the first experiment, incentive information was given to some of the responses but not others and the Ss were under instructions to try to learn correct responses. Presumably, this created a general set to repeat responses and when the data for the non-incentive conditions are analyzed as a function of practice, the baseline is an increasing function. In the other two experiments, attempts were made to eliminate, by instructions, the general motive to repeat, and no information was given to any response of S. In the second of these experiments, differing from the first only in the technique of recording group data, a practice baseline is achieved which stays consistently at 12% repetition across six trials.

The fact that an empirical baseline is finally demonstrated with no increasing practice function is a firm denial of "exercise" as a selective factor. This gives considerably greater meaning to the results of a series of experiments conducted by Stone on the influence of negative incentives in serial multiple-choice learning. In several situations involving intensive degrees of verbal and electrical shock punishment, the practice curves of response repetition invariably have increasing functions. As compared to the present baseline, therefore, Stone's conclusion that negative incentives strengthen the connections they follow is unconditionally supported. (Slides)

COMPARATIVE

2:50-3:50 P.M., Tuesday, Pan-American Room,
Mayflower

FRANK A. BEACH, Chairman

2:50 P.M. Investigations of the behavior of *Paramecium aurelia*: II. Modification of a response in successive generations of both mating types. BEATRICE GELBER, *Indiana University.*

A previous study demonstrates modification of behavior of the protozoan, *Paramecium aurelia*, after training with reinforcement. The question here was whether capacity for behavior modification would change in successive generations.

A generation is the period between fertilizations. Normally, nuclei contain two chromosomes of each kind. In fertilization, the nuclei divide into an egg and a sperm, each containing only one chromosome of each kind. The fusion of an egg and a sperm to form a new nucleus with two chromosomes of each kind completes the process. Thus, fertilization involves no increase in numbers. Numbers increase only by fission. Alternative fertilization processes in *P. aurelia* are:

1. Conjugation: Two paramecia of opposite mating types join together and exchange micronuclei. The animals separate after the migrating sperm micronuclei join the resting egg micronuclei.

2. Autogamy: The sperm and egg fuse in a single animal.

In this strain, animals denied opportunity for conjugation become autogamous about every 20 fissions. PROCEDURE: Two conjugant pairs were isolated while still tightly joined. Thus, after separation, there were two paramecia of each mating type in the first generation after conjugation. A "hungry" culture propagated from each of these four animals was trained to approach a platinum wire baited with food material. Frequency of response after training was noted.

Other products of these four animals were permitted to complete 20 fissions and become autogamous, producing the second generation. Again, four experimental cultures (one for each line) were trained, while other products completed the next autogamy. So, six generations were produced with two cultures of each mating type in each generation trained and tested.

RESULTS: The mating types differed significantly in response trend over the generations. One mating type showed significant change over the 6 generations, while the other mating type showed indications of periodicity but no significant change.

CONCLUSION: Successive autogamous generations and mating type are related in some way to capacity for modification of behavior in this organism. (Slides)

3:05 P.M. "Anxiety" and conditioning in salt water fishes. W. N. KELLOGG, *Florida State University.*

This study was conducted at the Marine Laboratories of The Florida State University on the Gulf of Mexico. Acknowledgement is hereby made to Mr. Peter Spanovik who performed most of the laboratory work.

PROBLEM: The problem was to condition fish by the classical or Pavlovian method, and at the same time to find out what happened to the respiration rate of the fishes during process of developing a CR.

SUBJECTS AND METHOD: 24 salt water mullet, *Mugil cephalus* (L), of approximately the same size and weight, were used in the study. The reinforcing stimulus was in all cases a D.C. electric shock, but the conditioned stimulus was visual for some groups of animals and acoustic for others. A systematic record of the respiration rate was kept, by counting the gill and mouth movements of each fish, throughout the progress of the experiment.

RESULTS AND CONCLUSIONS: (a) All fish developed a generalized CR within about 70 trials distributed over a 3-hr. session. (b) The conditioned response was distinctly different from the unconditioned response. (c) Light was more effective as a conditioned stimulus than four separate sound frequencies. (d) The respiration of all Ss, as determined by the rate of gill and mouth movements, progressively increased during the process of conditioning and decreased during extinction. (e) Correlation coefficients between the occurrence of the CR, per unit of 10 trials, and the rate of respiration were .75 and .96. ($p = .05$ and $.01$ respectively.) (f) This relationship may be interpreted, in line with reinforcement theory, as evidence of the building up of an increasingly powerful anxiety state, as the training progressed. (Slides)

3:20 P.M. An experimental study of the color vision of the giant tortoise. JOHN V. QUARANTA, *Fordham University*.

The present investigation was undertaken to determine the color vision capacities of the Giant Tortoise.

Subjects were two specimens of Galapagos Giant Tortoise, *elephantopus Guenther*, and one specimen of the Indian Ocean species of the Giant Tortoise, *Testudo gigantea Schweigger*. Microphotographs of histological sections of the retina of a specimen of *Testudo gigantea Schweigger* revealed the presence of a predominantly cone retina.

A preliminary study was conducted with two specimens of the Galapagos Giant Tortoise, employing colored papers of various brightnesses and saturations. In the main study, involving the use of filtered light, the experiment procedure for any one animal amounts to the following. Step I: Hold the reward color constant at a brightness level which will be crossed by the range of brightness values through which the nonreward color will be varied. Vary the intensity (brightness) of the nonreward color in very small steps (.25 volt) over a wide range of predetermined values (from 20 to 105 volts). Step II: Hold the

nonreward color constant and vary the reward color in the manner already described.

Approximately 1,300 trials for any one color combination of chromatic pairs (red-green, red-blue, and blue-green) were required to test the full number of intensity variations for the voltage ranges specified. Percentage success varied from 100% to 91%. All unsuccessful discriminations were subsequently retested with an equal number of previously-tested successful discriminations. All discriminations were ultimately successful. (Slides)

3:35 P.M. An investigation of learning in the earthworm. JOHN S. ROBINSON, *Cornell University*. (Sponsor, Robert B. MacLeod)

PROBLEM: Review of earlier studies of the earthworm's mastery of the T-maze reveals that data sufficient for an adequate interpretation of the learning involved are not provided by these studies. The present study provides a more adequate experimental basis for a theoretical interpretation of the earthworm's acquisition of new behavior patterns.

SUBJECTS: 5 earthworms (*Lumbricus terrestris*).

PROCEDURE: The preliminary series consisted of trials run for the purpose of habituating the worms to the apparatus and determining their turning preferences in the T-maze situation. Both arms of the maze were free during these trials. This was followed by the training series. The worm was now required to go consistently to the nonpreferred side in order to gain access to the goal box (a covered box containing moistened earth). The worm was shocked if it entered the opposite arm. Motivation was provided by directionalized light and mild tactual stimulation. Detailed records were made of every trial, including the path taken through the maze on each run, time per trial and the turn on each trial (correct-incorrect).

RESULTS: Two distinct modifications of behavior appeared in the course of training: (a) Slowing down of locomotion as a consequence of development of diffuse negative reactions to maze stimuli; and (b) An increase in the frequency of correct turns. Change (a) occurred at approximately trial 50 (relatively early in the training). Change (b) occurred at approximately trial 150. Both changes were significant at the .001 level.

CONCLUSIONS: The present study provides evidence of the existence of a *conditioning phase* and a *response-learning phase* in the earthworm's acquisition of the T-maze habit. Earlier interpretations of the worm-learning in the T-maze solely in terms of the association of stimuli were found to be inadequate to account for the data of the present study. The present study appears to support a two-factor theory of learning. (Slides)

SYMPOSIUM: INFORMATION THEORY AND ITS RELEVANCE TO PSYCHOLOGY

4:00-6:00 P.M., Tuesday, Williamsburg Room,
Mayflower

EDWIN B. NEWMAN, Chairman

Participants:

G. A. MILLER. Learning.

F. C. FRICK. Visual displays.

J. C. R. LICKLIDER. Communication.

W. R. GARNER. Psychological scales and judgment.

Discussants: D. A. GRANT, H. W. HAKE.

PSYCHOPHYSICS

8:40-9:40 A.M., Wednesday, Pan-American
Room, Mayflower

FREDERICK A. MOTE, Chairman

8:40 A.M. The central tendency of judgment as a regression phenomenon. DONALD M. JOHNSON, *Michigan State College*.

The central tendency of judgment, named by Hollingworth in 1909, is manifested (a) as a double truncation of the response scale, when this scale is described in terms of category thresholds, (b) as an overestimation of stimulus magnitudes below the center of the stimulus series and an underestimation of stimulus magnitudes above the center of the stimulus series, when stimulus ratings are averaged. A variety of explanations have been offered from time to time.

The thesis of this paper is that this central tendency of judgment is simply another manifestation of the regression toward the mean that always occurs when two variables are imperfectly correlated. In this case the judge begins with stimulus magnitudes and estimates response magnitudes. When the correlation between these two variables is less than perfect, central tendency or regression toward the mean is a statistical consequence. Compute the correlation between stimulus value and response value for a distribution of judgments. Write the ordinary regression equation. This equation yields the ratings and accounts for the central tendency.

The assumptions involved are linearity and homoscedasticity. Central tendency or regression will always occur when the variance of judgments of any stimulus is large relative to the variance of judgments of all stimuli in the series. The computations and theoretical consequences are illustrated by application to two sets of published data.

8:55 A.M. Serial exploration of sensitivity. E. A. JEROME, J. P. FLYNN and J. A. MOODY, *Naval Medical Research Institute*. (Sponsor, E. A. Jerome)

The general program in which this work developed is designed to investigate temporal and intraserial effects that influence changes in sensitivity. The method of serial exploration has long been considered the most direct and efficient method of studying these effects. The work reported was performed with an automatic presentation and recording device which permits the serial exploration procedure to be employed at a rate that is limited only by the speed with which *S* can give his judgment, i.e., the *E*'s time has been eliminated.

Differential sensitivity to intensity changes in an auditory signal was the particular test employed to evaluate this rapid procedure. Six *S*s were used in several experiments designed to evaluate the influence of (a) the rate of presentation, (b) the size of the constant increment, and (c) the effects of some of the traditional controls.

The results indicate that sensitivity indices are not reliably affected by presentation rate within the range of 24 to 60 stimuli per minute. It is clear from the introspections, however, that the subjects are disinclined to give judgments at a rate that exceeds 60 per minute. The size of the increment has an important temporal effect in that the larger increments yield more thresholds per unit of time, but the loss of precision that accompanies this result indicates that increment size should not exceed one standard deviation of the distribution of thresholds. The use of catch-tests increases the threshold by a small but reliable amount.

Preliminary analysis of the intraserial dependence among thresholds indicates that the assumption of independence of response and random fluctuation of sensitivity is unwarranted. (Slides)

9:10 A.M. The intraserial dependence of psychophysical responses. J. P. FLYNN, E. A. JEROME and J. A. MOODY, *Naval Medical Research Institute*. (Sponsor, J. P. Flynn)

The assumption of independence of threshold responses is basic to present theories of the psychometric function. This assumption has been found to be invalid in the analysis of responses of seven *S*s listening to a periodic change in the intensity of a 1,000 cycle tone. The change, which is of constant size for any single experiment, is in the range of uncertainty, and *S* presses a key each time he detects a change. The number of response groups, the group size, and the autocorrelations of the responses are inconsistent with the assumption of independence.

However, as the time between stimuli is increased from one to ten seconds, independence is approached but not attained. Further analysis revealed little evidence of a periodic change.

The bulk of the data can be adequately described by assuming that the preceding event affects the probability of the present one; the remaining data are explained by assuming that the two preceding events determine the probability of the present one. (Slides)

9:25 A.M. Are successive psychophysical judgments in a series independent? VIRGINIA L. SENDERS, *Antioch College*.

PROBLEM: Statistical techniques used in evaluating the results of psychophysical experiments usually require that each response be independent of preceding responses. Evidence from previous psychophysical experiments, from ESP experiments, and from experiments relating to the spread of effect, indicates that this requirement is not always fulfilled. The purpose of this investigation is to determine whether or not responses are independent when no stimulus differences are present.

SUBJECTS: 48 students at Antioch. None had previous experience as an observer.

PROCEDURE: Each *S* was presented with a light and a tone which were simultaneous in onset. He was told that sometimes the onset of the stimuli would be simultaneous, and sometimes one stimulus would precede the other. His task was to decide whether or not they were simultaneous. Three experimental variables were studied: (a) length of a series of judgments; (b) the proportion of simultaneous to nonsimultaneous stimulus pairs which the *S* was told to expect; and (c) the frequency of rest-periods allowed.

RESULTS: The raw data consisted of 192 series with an average of 200 judgments in each. An analysis of variance showed that the proportion of "simultaneous" to "not simultaneous" judgments was affected significantly by the proportion of simultaneous to nonsimultaneous stimulus presentations which *S* was told to expect. No other experimental variable had a significant effect. An autocorrelation function was obtained for each series of responses, using nine degrees of separation of responses in the series (τ). While no value of τ showed consistently high or consistently low autocorrelations, far more than 5% of the autocorrelations were significant at the 5% level.

Successive judgments in a series are thus shown not to be independent. This failure of independence might result from the influence of a response on succeeding responses, or from the influence of some common factor (such as threshold fluctuations) on whole groups of responses.

This research was done under USAF Contract No.

AF 18-600-50 with the Aero-Medical Laboratory, Research Division, Wright Air Development Center. (Slides)

ANXIETY-STRESS

9:40-10:40 A.M., Wednesday, East Room, Mayflower

M. H. MARX, Chairman

9:40 A.M. The effect of electroconvulsive shock (ECS) on a conditioned emotional response: the effect of post-ECS extinction on the reappearance of the response. JOSEPH V. BRADY, *Army Medical Service Graduate School*, and HOWARD F. HUNT, *University of Chicago*.

Previous research has demonstrated that a series of 21 ECS can diminish or virtually eliminate a conditioned emotional response (CER). It reappears within the first 30 days after ECS, however. The present experiment is designed to determine whether experimental extinction after ECS will prevent the reappearance of the response within 32 days after treatment.

Twenty-one naive, male albino rats received 8 conditioning trials in a grill box, each trial consisting of a 3-min. presentation of an intermittent light terminated by 2 painful shocks to the feet. Then, 13 rats received 21 ECS, 3 per day for 7 days; 8 control rats received pseudo-ECS.

Three days after the last ECS, all animals were tested for retention of the CER with an unreinforced presentation of the light. Then, 4 control and 7 ECS animals received 9 additional extinction trials in the apparatus; the remaining animals stayed in the home cages. Thirty-two days after the last ECS and 19 days after the last extinction trial, all animals were again tested for retention of the CER.

During the first retention test, only the control animals showed the CER (i.e., crouched and defecated in response to the light). During the subsequent extinction trials, 3 of the controls lost the CER; only two of the ECS animals showed any tendency to make the CER. During the second retention test, after extinction, all of the unextinguished control animals and all but one of the unextinguished ECS animals showed the CER. In contrast, of the control and ECS animals subjected to extinction only one in each group showed the CER.

The post-ECS extinction appears to have prevented the reappearance of the CER in the treated animals, even in animals that showed no external, behavioral signs of the CER during extinction.

9:55 A.M. Frustration effect during extinction of a bar-pressing response. FRANK N. MARZOCCO, *New York University*.

The amplitude of a previously rewarded response has been observed to increase following nonreward. Such an increase could be accounted for by assuming that frustration resulting from nonreward increases the organism's original drive level. The present study was designed to discover whether such an increase would occur after nonreward of a bar-pressing response, leading to an increase in the force exerted, and whether the magnitude of such increases would change as a function of experimental conditions.

Eighty-one albino rats were trained to press the bar of a Skinner box to obtain a pellet of food. A factorial design was employed, the three variables being: hours without food preceding extinction, training trials on the acquisition day, and intertrial interval on the extinction day. The first few responses of the extinction day were rewarded by food, the first nonreward coming at the end of the fourth trial. The mean force exerted on the first four trials of the extinction day was subtracted from that on the next four to obtain a measure of *frustration effect*.

It was found that of the experimental variables, only time of deprivation had a significant influence (5% level) on frustration effect, the relationship being an increasing one for the three values of hunger drive employed. When the data for all animals were considered simultaneously, it was found that the number of Ss showing a positive frustration effect was significantly greater than that showing a negative effect (0.1% level).

The data were interpreted as supporting the hypothesis that frustration, occasioned by failure of reward, acts as a motivational variable.

(This study was run at the State University of Iowa.)

10:10 A.M. Approach and avoidance gradients and conflict behavior in a predominantly temporal situation. W. K. RIGBY, *Jefferson Barracks, Missouri, VA Hospital*.

PROBLEM: The present study was designed (a) to test in a predominantly temporal situation the first three of Miller's four hypotheses concerning conflict behavior in spatial situation and (b) to study the Ss' behavior in a predominantly temporal conflict situation.

SUBJECTS: 4 naive male albino rats, 75 days old at the beginning of the experiment.

PROCEDURE: Each animal was restrained in the Bijou conditioning apparatus by a closely fitting wire cage and a stock hinged at the bottom permitting movement through an arc of 20 degrees. A light in front of the subject served as the approach conditioned stimulus (CS) and a buzzer as the avoidance CS. The unconditioned stimulus (US) for approach train-

ing consisted of presentation of food the animal could obtain by moving the stock forward. The US for avoidance training was an electric shock the animal could terminate by moving the stock backward. After preliminary conditioning in which CS and US were paired, measures of approach and avoidance movements were taken from a continuous record at five points during a 10-sec. interval between presentation of CS and US. These measurements described approach and avoidance behavior throughout the interval. After separate approach-avoidance training, a conflict situation was provided by simultaneous presentation of the positive and negative CS, and a record taken of the Ss' behavior in this situation.

RESULTS: 1. Results supported, at a statistically significant level, the hypotheses of both an approach and an avoidance gradient in a predominantly temporal situation.

2. The slope of these gradients tends to increase as the positive or negative reinforcement approaches in time.

3. Behavior of the Ss in the conflict situation supported the prediction made on the basis of a comparison of the slopes of the approach and avoidance gradients before conflict. (Slides)

10:25 A.M. Avoidance conditioning with brief shock and no exteroceptive "warning signal": The effects of two temporal parameters upon maintenance of avoidance behavior by the white rat.

MURRAY SIDMAN, *Columbia University*.

PROCEDURE: Conditioning, successful with 35 animals, involved the presentation of a .2-sec. shock at specified intervals. A bar depression occurring before the lapse of this interval delayed the shock for a specified duration. No other contingencies between exteroceptive stimulation and avoidance behavior were involved. The interval between shocks, if no avoidance response occurred, is the S-S interval; the interval by which each response delayed the shock is the R-S interval.

The effects of different S-S and R-S intervals upon the rate of avoidance responding were determined after conditioning was well established. A family of curves was secured for each of three animals, relating avoidance rate to the R-S interval, with the S-S interval a parameter. The three animals yielded replicative functions.

RESULTS: The rate of avoidance responding is a simple hyperbolic function of the longer R-S intervals. This function is interrupted by a maximum at one of the shorter intervals. The maximum rate is an hyperbolic function of the S-S interval. The R-S interval at which the maximum occurs increases with the S-S interval.

CONCLUSIONS: The avoidance response is strengthened by termination of non-avoidance behavior which has been paired with shock. As the R-S interval decreases, the increasing frequency of shock provides a greater probability that non-avoidance behavior will be paired with shock. This produces an increasing avoidance rate, the function being superseded at shorter R-S intervals by a "delay of punishment" gradient for the avoidance response itself. The shifting maximum indicates that shorter S-S intervals increase the probability of pairing between non-avoidance behavior and shock sufficiently to overcome this delay of punishment gradient. (Slides)

TRANSFER

11:00-12:00 M., Wednesday, Pan-American Room, Mayflower

HOWARD H. KENDLER, Chairman

11:00 A.M. Transfer in motor learning as a function of degree of first-task learning and intertask similarity. CARL P. DUNCAN, *Northwestern University*.

The purpose was to study transfer from one stimulus-response pattern to another, both of which were available on the same apparatus. The apparatus provided a paired-associates perceptual-motor task in which Ss learned to move a lever held by the right hand into a series of radially-arranged slots in response to colored-light stimuli. The task was made difficult by requiring the S to hold another lever, grasped by the right hand, in a fixed position.

The total group of 300 Ss was divided into four learning groups of 75 Ss each, differentiated on the basis of degree of learning of the first task. All Ss then transferred to a second task provided by newly pairing the stimuli and responses of the first task. There were three degrees of intertask similarity defined in terms of the number of stimulus-response pairs changed from the first to the second task. Within each learning group 25 Ss were assigned to each of the three similarity conditions.

When measured in terms of number of correct responses, transfer to the second task was positive for all experimental groups in comparison to a control. The positive transfer was an increasing function of both degree of first-task learning and intertask similarity. Degree of first-task learning continued to be a differentiating variable throughout the entire course of practice on the second task, whereas intertask similarity was effective only during the first half of second-task practice. Analysis of the error data also showed transfer to be positive. It is believed that the

results support that part of the theory of transfer based on response generalization. (Slides)

11:15 A.M. Transfer of training as a function of a relevant but "unused" cue in the training task. GORDON ECKSTRAND, *Aero Medical Laboratory, Wright Field, Dayton, Ohio*.

PROBLEM: When a discriminative motor task in which two relevant visual cues are available is learned using one of these cues, is anything learned about performing the task correctly using the other relevant cue?

SUBJECTS: 200 students from elementary psychology classes at Ohio State University.

PROCEDURE: Four separate experiments involving different cue relevance patterns were run. Each experiment consisted of giving two groups of 25 Ss each different experience prior to learning a common criterion task involving one relevant and one irrelevant cue. For the experimental groups, this prior experience consisted of learning a task identical with the criterion task except that an additional relevant cue was present. Procedures were used to maximize the number of Ss learning on the basis of this cue and only those who did were used in the critical comparisons. For the control groups, the prior experience consisted of learning a task in which both of the cues present in the criterion task were irrelevant and the additional relevant cue was present. To determine whether or not the experimental groups had learned anything about the cue-response associations required in the criterion task while learning the prior task, comparisons were made between the control and experimental groups on trials required and errors made in learning the criterion task.

RESULTS: No significant differences were found between control and experimental groups in any of the four experiments.

CONCLUSIONS: The results support the hypothesis that when a discriminative motor task involving two relevant visual cues is learned using one of these cues, little or nothing is learned about performing the task on the basis of the other relevant cue. (Slides)

11:30 A.M. Transfer of training in a symbol-substitution task as a function of first task learning and intertask similarity. MARVIN LEVINE, *Aero Medical Laboratory, Wright Field, Dayton, Ohio*. (Sponsor, Gordon A. Eckstrand)

PROBLEM: To determine whether the relationships between transfer of training and (a) degree of learning of the first task and (b) intertask similarity are the same for symbol-substitution tasks as for motor and verbal tasks.

SUBJECTS: 180 undergraduates.

PROCEDURE: Four degrees of learning (2, 4, 8, and 16 minutes of practice) of Task I and three degrees of change of Task II (which always lasted 10 minutes) from Task I were investigated in a factorial experiment using a symbol-substitution task. In this task 16 letters were associated with 16 different nonsense figures in a key which was always available to the Os; O went through a booklet containing only the symbols in randomized sequences, and wrote the correct letter under each symbol. The degree of change variable was effected by changing the symbol-letter associations in the key at the start of Task II. The dependent variable was the number of symbols substituted per 30-second interval during Task II.

RESULTS: The results indicate: (a) Negative transfer decreases with increasing degrees of learning, with a sharp increase in negative transfer for the 16-minute group; (b) Negative transfer increases with increasing degrees of intertask change; (c) Negative transfer and the differences between groups dissipate toward the end of Task II.

CONCLUSION: The obtained relationships are in agreement with those for motor and verbal tasks, except that we found (a) absolute negative transfer rather than relative interference of performance and (b) a sharp increase in negative transfer for extreme over-learning. A discussion will consider some possible causes of the discrepancies. (Slides)

11:45 A.M. Transfer suppression and learning sets.

ARTHUR J. RIOPELLE, *Emory University*.

This experiment investigated the interproblem transfer relations occurring in the formation of learning sets in four adolescent female rhesus monkeys.

The Ss had been tested previously on six rather difficult discrimination problems involving approximately 2,000 trials. The animals were required to select the rewarded member of each successive pair of stimulus objects. Apparatus, stimulus construction, and individual test-trial procedures were the same as those used by Harlow with the Wisconsin general test apparatus. Problems were presented for six trials and six problems were presented each day, the first five problems on a given day being completely new to the animal. After these five problems, however, either the first or the fourth problem of that day was reintroduced but this time the previously unrewarded object covered the food. This sequence of problems was repeated for 63 days, involving 315 new and 63 old, reversely rewarded problems.

Analysis of the percentage of correct responses by individual trials at various stages of training revealed that for the new problems the performances on trials 2, 3, 4, 5, and 6 improved with training. There was also improvement in the rate of intraproblem learning from the earlier to the later stages of training. These results reflect the formation of learning sets. On the reversed problems, the animals persistently selected the originally correct object during the early part of training, even though it no longer covered the food. As training continued, this transfer tendency was suppressed despite increased learning of the problem during its initial presentation so that eventually, old, reversed problems were learned at the same rate as new problems, suggesting that the successive problems became functionally independent of each other. (Slides)

DIVISION ON EVALUATION AND MEASUREMENT

SYMPOSIUM: PROPOSED APA TEST STANDARDS

9:50-11:50 A.M., Monday, Federal Room, Statler

WALTER V. BINGHAM, Chairman

Participants: LEE J. CRONBACH, E. L. BORDIN, LLOYD G. HUMPHREYS, W. A. HUNT, HAROLD M. HILDRETH.

Standards for published psychological tests, being prepared by an APA committee, will be published in draft form in the August *American Psychologist*. This panel will discuss the purpose and content of the standards. The audience is invited to participate in this "open hearing" with questions and critical comments.

TEST METHODS

1:40-2:40 P.M., Monday, Pan-American Room, Statler

ALEXANDER G. WESMAN, Chairman

1:40 P.M. Improving the predictive value of an interest test. NORMAN FREDERIKSEN and S. D. MELVILLE, *Princeton University and Educational Testing Service*.

PROBLEM: To test the hypothesis that the effectiveness of an interest test for predicting achievement in engineering may be increased by identifying subgroups for which the test is especially appropriate.

SUBJECTS: 155 students who completed the freshman

year in engineering at Princeton and who took the Strong Vocational Interest Blank.

PROCEDURE: Two methods were used to separate students into subgroups. One involved dividing the group at the regression line of Speed of Comprehension scores on Vocabulary scores (from the Cooperative reading test). Those below the line, for whom Speed was low in relation to Vocabulary, comprised one subgroup, and those above another. The other method was based on scores from the Accountant scale of the Strong blank; the two subgroups were those above and below the group's mean. Both methods of forming subgroups were based on the hypothesis that interest scores would be low in predictive value for students who tend to prefer activities involving attention to detail.

The correlations of freshman average grade with each of ten Strong interest scales were obtained for each subgroup separately. The Strong scales chosen were those previously found to have the highest correlations with freshman engineering grades.

RESULTS: In nine of the ten comparisons, the correlation of interest with grades was higher for students who read rapidly in relation to vocabulary than for those who read slowly. In nine of the ten comparisons, the correlation was higher for students with low scores on the Accountant scale than for those with high scores.

IMPLICATIONS: Such results, though needing verification with larger groups and other methods, suggest a procedure for predicting achievement which is between the mass testing method and the clinical method. Such a procedure would involve the identification of subgroups for whom certain tests are particularly appropriate.

1:55 P.M. The Tab Item: A technique for the measurement of proficiency in diagnostic problem-solving tasks. DORA E. DAMRIN and ROBERT GLASER, *University of Illinois and the American Institute for Research*. (Sponsor, Robert Glaser)

This paper describes a "paper-and-no-pencil" technique of measurement devised to short-cut the work-sample type of performance measure without sacrificing to a large extent the added validity that such measures usually possess over paper-and-pencil group tests. The Tab Item, so-called because of its construction, is designed to measure a type of problem-solving behavior which involves the serial performance of a set of acts or procedures where the performance of one procedure yields information which supplies a cue for the selection of the next and subsequent procedures.

The Tab Item presents the examinee with (a) the description of a problem to be solved; (b) a series

of procedures which, if employed, might yield information relevant to the solution of this problem; (c) a list of specific choices one of which, if selected, solves the problem. In taking the test the examinee is free to select any combination of the particular procedures presented which he thinks will provide him with information necessary to solve the problem. The results of whatever procedures the examinee performs are given to him *at the time he performs them*, as is the correctness or incorrectness of his final solution. This is accomplished by giving the results or consequences of his acts in the form of verbal or diagrammatic information, and covering the information by a tab fastened to the page. When the examinee performs an act he rips off the tab—thus learning the consequences of that act as it applies to the solution of the problem.

Scoring and item analysis characteristics of the Tab Item are presented.

2:10 P.M. An empirical comparison of five methods of shortening a test. MARJORIE A. OLSEN and WILLIAM B. SCHRADER, *Educational Testing Service*.

This study was designed to provide an empirical comparison of five methods of shortening the Law School Admission Test (LSAT). Only six subtests of the LSAT, requiring 190 minutes of testing time, were analyzed in this study. The time allotted to trial scoring keys was limited to 135 minutes, so that material not in the analysis could be added later. Items were chosen for these keys by each of the following procedures: (1) Internal consistency item analysis; (2) External criterion item analysis; (3) A method involving the ratio of item-criterion correlation to item-subtest correlation, substantially as described by Gulliksen; (4) A method described by Horst (Condition III) for estimating optimal times for subtests; and (5) A linear method for estimating optimal times for subtests.

This study was based on two parallel subsamples of 500 first-year students enrolled in nine law schools. The five methods of analysis were applied to each subsample, and trial scoring keys obtained from one subsample were validated against first-year law school grades for the opposite subsample.

The results of the cross-validation may be summarized as follows: For subsample I, the validity coefficients for the five trial scoring keys ranged from .568 to .576; the coefficient for total score on the six subtests was .586 for this group. For subsample II, the validities of the trial keys were between .483 and .496, as compared with .493 for the six subtests.

In a less extensive study of a different form of LSAT, the linear method (which showed a slight

over-all superiority in the first study) was used to select items requiring 135 minutes from nine subtests requiring 300 minutes. The validity coefficient for the trial key, based on a cross-validation sample of 500 students, was .466, as compared with a value of .454 for the nine subtests.

2:25 P.M. Equating of the ACE Psychological Examinations for High School Students. WILLIAM H. ANGOFF, *Educational Testing Service*.

Five forms of the ACE High School Examination are available for general distribution. The purpose of the equating program was to relate the scores on the five equivalent forms so that the forms could be interchanged in administration with no resulting bias on an examinee's record resulting from differences in level and spread of difficulty of the items in any particular form.

The design chosen for the study was one that would yield maximum likelihood estimates of mean and variance for the scores on each of the forms. These estimates would be used to determine a set of linear equations for translating scores on any form to equivalent scores on any other form. For this purpose, approximately 250 students were chosen from each of the 8th and 12th grades, for each of the five forms of the test. The choice of these extreme groups was made in order to maximize the standard deviations of scores for each form and thus to sample the entire range of ability measured by the test scale. Each student was administered one of these forms, requiring about 60 minutes of testing time. In addition, every student took a separately timed 48-item 10-minute adaptation of the ACE, taken from items in earlier forms of the ACE. This short form, called YPEX, paralleled the long forms in item content and distribution of item difficulty, but contained no items in common with any of the long forms of the test. For each of the three ACE scores, Q, L, and T, on each of the five forms, maximum likelihood estimates were made of mean and variance for the entire population of about 2,500 who took the short form YPEX. Means and sigmas for each of the forms were then equated, and linear equations were provided to convert scores on any of the five forms to scores on any other of the five forms.

VALIDITY STUDIES I

2:50-3:50 P.M., Monday, Pan-American Room,
Stallier

THOMAS L. BRANSFORD, Chairman

2:50 P.M. A validity study of the Iowa Language Aptitude Examination. WILLIAM J. MORGAN, *Aptitude Associates, Merrifield, Virginia*.

PROBLEM: To determine the effectiveness of the Iowa Language Aptitude Examination in predicting ability to learn Russian.

SUBJECTS AND PROCEDURE: This is one of a series of studies on the value of aptitude tests for predicting foreign language proficiency, sponsored by The Institute of Languages & Linguistics of Georgetown University. 163 students were given the Iowa before beginning the study of Russian. The 163 were in 13 different classes, which varied in size from 7 to 18 students. Forty-one were females, 122 males. Their mean age was 28.7, *SD* 3.5: the oldest was 61, the youngest 21. Eight were high school graduates, 85 had bachelor's degrees, 57 master's, 6 PhD's, and 7 LLB's in addition to bachelor's. Seven of the 13 classes were enrolled in an all-day intensive six weeks course; 5 classes, all day for 8 weeks; 2 classes, half day for 12 weeks. At the end of the language courses, the instructors evaluated language proficiency by: (a) ranking the students in each class, and (b) assigning each student one of six possible adjectival ratings (Superior, Excellent, Satisfactory, Mediocre, Poor, Failure).

RESULTS: (a) Iowa score vs. rank in class: 8 of the 13 *r*'s were significant at either the 5 or 1% level. The *r*'s ranged from .16 to .84. (b) Iowa score vs. adjectival rating: 6 of the 13 *r*'s were significant at either the 5 or 1% level. The *r*'s ranged from .20 to .78. (c) The over-all *r*'s of .58 for rank and .51 for adjectival rating were both significant at well beyond the 1% level. (d) A statistical analysis will also be given of the role of age, education, sex, motivation, and previous study of other languages in the ability of the students to learn Russian.

CONCLUSIONS: The advantages and limitations of the Iowa will be discussed and an *abac* for it will be distributed.

3:05 P.M. The characteristics and usefulness of rate scores on college aptitude tests. ROBERT L. EBEL, *State University of Iowa*.

Rate scores were determined by having examinees record on their answer sheets the number of the last item they had answered when half, three-fourths and seven-eighths of the time had elapsed. Total time allowed was sufficient to permit almost all examinees to finish. The directions to students emphasized the importance of accuracy, but did not mention speed. The tests given were an English Placement Test, a Reading Comprehension Test, a Mathematics Skills Test, and a Social Studies Understanding Test. All involved multiple choice type items.

The purpose of the study was to determine (a) the average rate at which entering students would cover the items in each test, (b) the variability in rate from

student to student on each test, (c) the reliability of rate scores determined by this method, (d) the degree of consistency shown by examinees in working rapidly or slowly on all tests, (e) the relation between rate and accuracy scores on each test, and (f) the relation between rate scores and academic success, as measured by freshman grade point average.

The data presented indicate considerable variability from test to test and from student to student in rate of coverage of items. The reliability of the rate scores obtained in this way was approximately .90. The correlations between rate scores on different tests and between rate and accuracy scores on the same test are moderately low (.20 to .45). The rate scores are not as highly related to academic success as are accuracy scores, but they make a substantial independent contribution to the prediction of success.

3:20 P.M. Prediction of performance in a Navy dental prosthetic technician training course. ADOLPH V. ANDERSON and SIDNEY FRIEDMAN, *Bureau of Naval Personnel*. (Sponsor, Sidney Friedman)

PROBLEM: The United States Navy conducts a six-month training course designed to provide dental technicians with comprehensive training in the laboratory fabrication of dental prosthetic devices. This study was instituted to develop a battery of tests which would adequately predict performance in such a training course.

SUBJECTS: Approximately 150 students in three dental prosthetic technician classes.

PROCEDURE: A battery of five tests was administered to students in the early part of their training. Four of these tests were paper and pencil tests, the fifth an American Dental Association chalk carving test. The carvings were not rated according to instructions provided by the ADA, but, instead, were rated on a forced-choice, five-step scale on each of four attributes. Carvings were rated by Dental School staff members. Grades obtained at the end of the course reflected two aspects of the training: the theoretical work and the practical laboratory work. A correlation matrix was computed for test and subtest scores, certain background information measures, and final grades. Multiple correlation coefficients using various combinations of predictor variables were derived.

RESULTS: The chalk carving ratings, as obtained in this study, proved to be highly reliable, averaging about .90 for four raters (Horst's Generalized Formula). Several paper and pencil measures and the chalk carving ratings were clearly related to achievement in the theoretical aspect of the course; chalk carving scores were by far the best predictors of laboratory performance (zero-order r 's near .50). Mul-

tiples correlations of approximately .70 were obtained with both theoretical and laboratory grades.

3:35 P.M. Comparative three-year and one-year validities of the Law School Admission Test at two law schools. A. PEMBERTON JOHNSON and MARJORIE A. OLSEN, *Educational Testing Service*.

PROBLEM: How do Law School Admission Test (LSAT) validity coefficients for the complete three-year programs of study at two law schools compare with those for the first year's program?

SUBJECTS AND PROCEDURES: Each of the two law school groups included all of the members of the regular class which entered in September 1948 for whom complete data were available. These students had taken the Law School Admission Test in regular national administrations from 1 to 5 months before entrance.

At school A, LSAT scores and prelaw grades for 100 graduates were validated against first year and against three-year law school averages, using product-moment zero-order and multiple correlations.

At law school B, the LSAT scores available for 234 students were validated against a first year pass-fail criterion. The LSAT scores for 225 of the 234 (9 had withdrawn in the 2nd and 3rd years) were validated against a passed-three-years (or failed-before-the-end-of-three-years) criterion. For this group, the LSAT score distributions were split near the mean and tetrachoric correlations obtained.

RESULTS: At school A, LSAT scores correlated .35 with first year and .39 with three-year grades. The multiple correlation of LSAT scores combined with prelaw grades was .50 against first-year grades and .54 against three-year grades. At school B, LSAT scores correlated .50 both with first-year and three-year performance.

CONCLUSIONS: In these two schools, LSAT scores predict three-year law school grades as well as or better than they predict first-year grades. The somewhat unusual similarity of the coefficients supports use of the first-year criterion in subsequent validity studies as a substitute for the three-year measure of scholastic success in law school.

VALIDITY STUDIES II

4:00-4:45 P.M., Monday, Pan-American Room, Statler

ROGER LENNON, Chairman

4:00 P.M. Prediction of success in architecture courses. DAVID R. KRATHWOHL, T. N. EWING, W. M. GILBERT, and LEE J. CRONBACH, *University of Illinois*.

PROBLEM: To identify characteristics contributing to success in architecture training.

SUBJECTS: 98 freshman architecture students at the University of Illinois.

PROCEDURE: 1. Predictors—A pilot study on thirty-five sophomores was used to select promising predictors. Tests administered to the freshmen included the ACE Psychological Examination, Bennett Mechanical Comprehension Test, Object Aperture Test, and Cooperative General Proficiency Test in Mathematics. Also included was the Illinois Art Test by Gilbert and Ewing which was based on an item type from the Knauber Art Ability Test found to have validity in the pilot study. Several other tests of both multiple-response and projective types were given for exploratory purposes.

2. Criteria—Grades were used as criteria. In order to obtain better discrimination, composite criteria combining grades with instructors' ratings were developed for the basic first-year art and architecture courses.

RESULTS: 1. The number of cases used in computing the intercorrelations for the multiple correlations ranged from 49 to 73. Over-all grade average for the first year was predicted ($R = .46$) by the Cooperative Mathematics ($r = .37$), Object Aperture ($r = .36$), and ACE Psychological ($r = .38$). The first semester grade average was much more predictable ($R = .71$).

2. Composite criterion in engineering drawing was predicted ($R = .67$) by the Bennett Mechanical Comprehension ($r = .60$), the Object Aperture Test ($r = .57$) and Cooperative Mathematics Test ($r = .40$).

3. Composite criterion in freehand drawing was predicted ($R = .47$) by the Illinois Art Test ($r = .42$), the Object Aperture Test ($r = .30$), and the Cooperative Mathematics Test ($r = .27$).

4. A year course in freehand drawing was more predictable from the composite score of grades and instructor ratings than from grades alone. In engineering drawing introducing ratings did not increase predictability of the criterion.

5. A prediction battery chosen in terms of the over-all grade average as a criterion would omit measures of aptitudes which are significant for particular basic courses. Prediction of these specific aspects of success is necessary for guidance or selection of students.

4:15 P.M. Validity of Rorschach M and H plus Hd for predicting fieldwork performance of student social workers. ALLAN H. FRANKLE, *Des Moines Child Guidance Center*.

PROBLEM: Are Rorschach M and H plus Hd related to fieldwork performance in social casework training? These particular Rorschach items may measure such

hypothetical personality variables as the self-concept, capacity for identification, interest in people, and emotional maturity. While significance of individual Rorschach variables is not yet fully understood, these seemed logically relevant to fieldwork performance involving close interpersonal relationships between students and clients. This research also aims to clarify the controversial issue of whether single Rorschach variables can be used directly to predict behavior, outside Gestalt context.

SUBJECTS: 52 graduate students, School of Social Service Administration, University of Chicago, 1948.

PROCEDURE: These students constitute half of a total sample tested with the Group Rorschach. Records were scored for human and M responses. "Human" includes all H and Hd responses, but not $Anat$ or (H); " M " includes animals in human movement. Criterion is fieldwork grade-point-average. The most effective predictor combination was found to be: (a) at least one $M +$ (accurate M) to four or more different plates; and/or (b) at least one H or Hd to five or more different plates. If either or both of these critical levels were attained, a "satisfactory" prediction was made; if neither attained, an "unsatisfactory" forecast was made.

RESULTS: Dividing the group into high and low halves on the basis of fieldwork GPA (excluding academic course grades), critical predictor scores rejected 3 of the 26 "highs" versus 17 of the 26 "lows." Chi square for this division, applying the single tailed test, yields results below the .005 level of confidence. Cross-validation on a matched sample of 52 cases is now proceeding for the same variables and criterion.

4:30 P.M. A test of rating scale validity. DEAN K. WHITLA, *Personnel Planning, Hq USAF*.

PROBLEM: To determine the relative validities of ratings which are given by immediate supervisors as compared with those given by the next level of management.

PROCEDURE: The Ss were 100 flight mechanics at Bolling Field Air Force Base. They consisted of three flights of 39, 38, and 23 men; each member of the flights was rated by the officer in charge, the NCO flight chief and his immediate NCO supervisor.

The rating scale used was composed of three portions with major headings of (a) How Well Does He Get Along With Others?, (b) How Much Does He Know About His Job? and (c) How Well Does He Do His Job? These scales were graphically illustrated, indicating a normal distribution over a six-interval continuum. Raters were instructed to rate all of their men on each portion of the rating scale before proceeding to the next.

The Flight Mechanics Job Knowledge Test was used as a criterion measure for the rating scale. It was administered to the 100 ratees at the time they were rated but the raters had no knowledge of the results.

Correlations were calculated between the various portions of the rating scale and the criterion measure for all raters.

RESULTS: The correlations between the Job Knowledge Test and the immediate NCO supervisor ratings on the portion of the scale "How Much Does He Know About His Job?" tended to be significantly higher than those obtained by the flight chief NCO's and the flight officers.

The correlations between the other portions of the scale by the immediate NCO supervisors' ratings did not differ significantly from those obtained by the other supervisors.

These results tend to indicate that ratings given by the immediate supervisors are more valid and have less halo effect than those given by higher level supervisors. And, with limiting circumstances, the hypothesis of comparability of ratings by different raters is supported.

MEASUREMENT OF PERSONALITY

8:40-9:40 A.M., Tuesday, Pan-American Room,
Statler

MALCOLM J. WILLIAMS, Chairman

8:40 A.M. A factorial study of verbal fluency and related dimensions of personality. C. A. ROGERS, *University of London; Institute of Education.* (Sponsor, P. E. Vernon)

PROBLEM: (a) To determine the structure of written and oral fluency. (b) To determine the relation of verbal fluency to several dimensions of personality. (c) To calculate mathematical constants for fluency and see if higher personality correlates are so obtained.

SUBJECTS: A representative sample of one hundred 14-year-old children from Surrey, England.

PROCEDURES: (a) Twenty-six tests, representative of the British and American researches on fluency, were selected for the factor analysis. Eighteen were written tests and eight were recorded on a dictaphone as oral tests. (b) Behaviour ratings, questionnaires and objective tests were also set up to measure cyclothymia, dominance, surgency, level of aspiration, static ataxia, suggestibility, and reaction time. This furnished a matrix of thirty-six cognitive and personality measures. (c) Fluency constants for several tests were derived from an exponential equation proposed by

Godfrey Thomson and these were analysed along with the personality measures.

RESULTS: The three rotational problems were solved simultaneously to ensure a common cognitive structure. Orthogonal rotation to a hierarchical solution gave the following results: (a) A factor of "general verbal ability" accounted for 39 per cent of the total variance. Independent group factors were an "oral facility" and a "facility in writing." Two minor factors accounted for the fluency of other British and American researches. (b) A general factor, probably extraversion, explained the major variance of cyclothymia, dominance, and surgency. Surgency, with an average loading of .30, was related to oral facility but not to facility in writing. The latter was slightly related to dominance. Cyclothymia, suggestibility, and static ataxia were not related to either form of fluency. (c) The mathematically derived fluency scores did not give any better correlation with the personality measures.

8:55 A.M. The reliability of individual inquiries and scorings of the Rorschach. JOHN H. ROHRER, JAMES W. BAGBY, JR., and WALTER L. WILKINS, *Tulane University, Department of the Navy, and St. Louis University.*

PROBLEM: To establish the statistical reliability of Rorschach scoring techniques when the inquiry is made by the scorer.

SUBJECTS: 100 enlisted men in the U. S. Marine Corps who were attending an officer candidate screening course.

PROCEDURE: A modified group Rorschach technique was used which involved the successive projection of the Rorschach cards to a screen in the presence of groups of fifteen men. The candidates wrote down what they saw in a test booklet provided for this purpose. Following the presentation of the ten cards, an individual inquiry with each candidate was conducted by a group of clinical psychologists. The inquiry was made to determine what the candidate meant when he wrote down his response and what portion of the cards stimulated the response. Each protocol so obtained was then individually scored by the psychologist who conducted the inquiry. This procedure was carried out with 887 candidates. From this group 100 candidates were selected at random for a reliability run. They were assigned at random to a second psychologist who took the original responses, conducted a second inquiry, and scored the protocol on the basis of his inquiry. A reliability measure was obtained by correlating the degree to which the first and second psychologist agreed on the final scoring on the test. Thirty-nine scoring categories were so treated. Estimates were also obtained on the reliability

of scoring when the skill and experience of the psychologists were varied.

RESULTS: The reliability coefficients ranged from .99 to .07, for the various scoring categories studied. The median coefficient was .72. Comparison between scorings of the least experienced and the most experienced pairs of Rorschach technicians revealed an increase in the reliability coefficient of approximately one-sixth the remaining area for improvement; e.g., raising the coefficient from .65 to .77.

CONCLUSIONS: Scoring procedures, as described, have sufficient statistical reliability to justify their use on large scale assessment programs.

9:10 A.M. An approach to the measurement of social insight. GORDON V. ANDERSON, *The University of Texas*.

PROBLEM: To define the nature of social insight, develop improved methods for its measurement, and investigate its relationship to other factors of mental ability.

POPULATION: 549 men and 609 women—students entering the University of Texas in September, 1951.

PROCEDURE: Included in a battery of tests given all entering students was a 60-item test of social insight, each item presenting a social situation which includes a conflict or a problem to be solved. A choice of possible solutions is presented. The "correct" solution is the one which had been judged to be a line of action which would result in a general improvement of the interpersonal relationships of all those involved in the situation. The present instrument is one which has been revised three times previously following wide administration.

Scores obtained by the students were used as a basis for further item analysis, were correlated with other tests taken, and the resulting matrix factored to see if the principal variance on the test could be accounted for by previously established factors.

RESULTS: The mean of the scores for male students was 31.60, for female students 35.55. This difference was highly significant. Results for the two groups were treated separately. Factors associated with sex differences on the test will be discussed. Correlations between the Social Insight test scores and scores on tests of general scholastic ability and of reading ability were low. The item analysis using both total scores and scores on other variables as criteria provided data which were used as a basis for generalizations concerning the nature of social insight as a separate mental ability factor.

The extent to which personality factors may be revealed by a test in the area of social relations set up in problem form is given attention and some findings from small groups which took both the Social Insight

test, the tests of factors GAMIN, STDCR, and O, Ag and Co, the Study of Values, and the Kuder Preference Record will be presented.

9:25 A.M. A comparison of three approaches to the assessment of maladjustment among school children. CHARLES A. ULLMANN, *United States Public Health Service*.

PROBLEM: To survey the nature and extent of the mental health problem among ninth grade children and compare three approaches to the identification of maladjusted individuals.

SUBJECTS: 404 boys and 406 girls in 23 classrooms. The sample included 97.5 per cent of the students in these classes and 44.5 per cent of all ninth graders.

PROCEDURE: Teachers' judgments were compared with sociometric scores and student personality test scores. In a simultaneous study in Grades 4 to 8, the manner in which teachers used 194 potential test-items in discriminating between well-adjusted and maladjusted children was compared with ratings of the same items by 22 clinicians.

RESULTS: Teachers thought that eight per cent of the children would have serious problems of adjustment. On this basis, teachers regard mental health assistance to be as necessary now as at the time of Wickman's study in 1927. Teachers' and clinicians' ratings of items correlated 0.86. The correlations of both teachers' and peers' ratings with student adjustment scores on self-descriptive personality tests varied from 0.15 to 0.33. Self-descriptive tests intercorrelated from 0.47 to 0.73. Correlation of teachers' ratings with sociometric scores was 0.56; marked sex differences here were reduced by a forced-choice technique.

The picture of maladjustment is a function of the type of instrument used to measure it. Rating devices appeared to have more in common with the adjustment of boys and personality tests with adjustment of girls.

Ratings appear to be better measures of that aspect of maladjustment which has to do with society's reaction to acted-out behavior, and self-descriptive data appear to be better measures of that aspect of maladjustment which has to do with feelings, attitudes, and what the person himself will undertake. (Slides)

METHODS OF EVALUATION

9:50-10:50 A.M., Tuesday, Pan-American Room
Statler

ANTHONY C. TUCKER, Chairman

9:50 A.M. Evaluation of performance criteria for air traffic controllers. MAHLON V. TAYLOR, JR., *American Institute for Research*.

PROBLEM: To evaluate several types of performance criterion measures for air traffic controllers.

SUBJECTS: Data were obtained for over 250 subjects from 27 CAA facilities. The principal results are based on 140 air traffic controllers from seven larger control centers and towers.

PROCEDURE: Staff and operating personnel in two CAA administrative regions cooperated in collecting criterion data for as many Airway Operation Specialists as feasible in the facilities studied. Criterion measures included two types of personnel evaluations for official purposes, a specially developed performance record, and supervisors' ratings. The performance records covered ten areas of critical behavior and were first prepared from recollection, then for a period of observation. Supervisors' ratings varied in form and number of raters. Not all measures could be obtained in useful form from all facilities.

Seven types of measures were intercorrelated within samples for which $N \geq 10$. Weighted averages of sample coefficients were obtained via s , and implications of the resulting matrix elaborated.

RESULTS: Generally criterion intercorrelations were about as expected. Supervisors' ratings, however, were uniformly and remarkably consistent when made for unofficial purposes, but when made for official purposes had only moderate average intercorrelations, with very considerable sample fluctuations. The measures in order of general factor saturations, from largest to smallest, were: (a) supervisors' ratings; (b) recalled effective behaviors; (c) the average of two semiannual official evaluations; (d) recalled ineffective behaviors; (e) another official evaluation; (f) observed ineffective behaviors; and (g) observed effective behaviors.

CONCLUSION: In the situation studied: (a) there are serious discrepancies between supervisors' ratings of personnel for official and unofficial purposes; (b) observation records of performance are relatively independent of more subjective evaluations; (c) reliability of criterion measures fluctuates considerably, both among measures within samples, and among samples for the same measure.

Theoretical and practical implications of the results will be discussed.

10:05 A.M. Development and evaluation of objective tests for advanced specializations. WARREN G. FINDLEY, *Educational Testing Service, Princeton, New Jersey.*

PROBLEM: The preparation of objective tests for advanced specializations (Advanced Tests of Graduate Record Examination and all examinations of the National Board of Medical Examiners) presents unique hazards in that it is generally impossible to find persons available who combine requisite com-

petence in the specialty with competence in test development. The problem is intensified now that we demand tests that measure ability to apply knowledge. Evaluation of tests produced is difficult because the number of examinees following a common curriculum or permitting any type of validation is small.

SUBJECTS: Examinees in the national and institutional testing programs of the Graduate Record Examination; second-year and fourth-year medical students taking the examinations of the National Board of Medical Examiners.

1. Panel of specialists is nominated by top professional organization in field.

2. Working committee of five is chosen from panel.

3. Committee is charged with defining scope of examination, writing questions, and criticizing one another's questions.

4. Samples of question types and of illustrative questions from lower levels in the same field or similar levels in allied fields are furnished and discussed.

5. Test specialist most fully trained in specialty participates in all committee sessions and performs liaison activities.

Test Evaluation: (a) Internal consistency statistics on exercises produced, (b) Correlations with proficiency ratings in medical training.

RESULTS: Fourteen Advanced Tests of the Graduate Record Examination as revised in 1949-1951 contain many applied exercises. Their item statistics compare favorably with those of the more usual item types. Such data are also available for the examinations of the NBME, as well as correlations between test scores and professors' ratings of students' proficiency in medical training; available data for two tests show favorable comparison with correlations of traditional essay tests with the same criterion.

10:20 A.M. Comparison of forced choice and graphic rating forms. JAMES R. BERKSHIRE and RICHARD W. HIGHLAND, *Technical Training Research Laboratory, Human Resources Research Center.*

PROBLEM: To compare validities, reliabilities, and leniency effects on four forced-choice rating forms and a graphic rating scale under experimental and operational conditions.

SUBJECTS: Approximately 3,600 instructors and 400 instructor-supervisors.

PROCEDURES: Supervisors rated instructors on a graphic rating scale, and one of four forced-choice forms. Supervisors' rankings of instructors were converted to standard scores for use as criteria. Thirty days later a 20 per cent sample was rerated.

RESULTS: Forced-choice validity coefficients ranged from .50 to .58. The graphic scale coefficient was .59. Validity coefficients of combined forced-choice and graphic scores ranged from .60 to .66. With ranked

groups of five to twenty members validity coefficients increased substantially, but irregularly, with group size. Test-retest reliability coefficients ranged from .72 to .82, interform coefficients from .34 to .82. Only one forced-choice form showed no significant increase of mean score under operational as contrasted with experimental conditions.

CONCLUSIONS: 1. Of the forced-choice forms, one using four favorable-appearing statements per block was most valid and resistant to leniency-effects, one using two-choice blocks was most reliable, while one using three-choice blocks was inferior on all counts.

2. Used in conjunction with forced-choice scales a graphic rating scale was not inferior to them and increased the validity of the rating procedure.

3. When ranks are converted to standard scores, size of group ranked substantially affects magnitudes of correlations with other variables.

10:35 A.M. Methods for the evaluation of the quality of rational decisions. IRVING LORGE, DAVID FOX, KENNETH HERROLD, and JOEL DAVITZ, *Teachers College, Columbia University*. (Sponsor, Irving Lorge)

PROBLEM: Everyday life problems require rational judgments or decisions based upon the consideration of a complex of factors. Such decisions or plans of action cannot be evaluated in terms of a unique, "best" solution. The present study was designed to develop and appraise several methods for evaluating the quality of rational decisions.

SUBJECTS: 450 Air Force officers enrolled at the Air University, Staff and Command School.

PROCEDURE: The subjects were instructed to devise a concrete and comprehensive plan of action to raise the morale of an isolated Air Force base. In addition to the immediate problem, information concerning the base facilities, mission, personnel, and other relevant data were included in the statement of the problem. The plan of action was reported in the form of a written decision.

From the 500 decisions, 35 individual and 15 group decisions were randomly selected for the present study. Several methods of evaluation of the quality of the decisions have been attempted: 1) judgment of the over-all "goodness" of decision; 2) judgment of aspects of quality of the decision, e.g., comprehensiveness, concreteness, etc.; 3) a quality score based on credits for content points in the decision.

RESULTS: The results indicate that the most reliable method is the quality score based on the sum of credits for unduplicated points in a decision. Intermediate reliabilities were obtained where judges evaluated aspects of the quality of decision. The least reliability was obtained where judges evaluated the decision as a whole.

It must be pointed out that the method of credits involves the indeterminacy of the quantitative scores assigned to each unduplicated point. Yet, as a method, it is sensitive enough to give evidence of the impact of instruction on decision-making.

This research was conducted under a contract with the Human Resources Research Institute of the Air University, Maxwell Field.

EFFECTS OF CHANGES IN TEST ADMINISTRATION

11:00-12:00 M., Tuesday, Pan-American Room, Statler

EDWARD A. RUNDQUIST, Chairman

11:00 A.M. Effects of administering a test battery under two schedules. LEON G. GOLDSTEIN, CECIL D. JOHNSON, and EDMUND F. FUCHS, *Personnel Research Section, AGO*.

PROBLEM: The purpose of this study was to compare two schedules of administering the Army Classification Battery. In the one method the recruit takes all of the ten tests in one day; in the other method he takes the first five tests during one morning, and the last five tests the next morning.

POPULATION: The population consisted of approximately 1,200 recruits of the regular induction flow at an Army Reception Center.

PROCEDURE: All the Ss (approximately 1,200) were given the first five tests together; then half of them (controls) took the second five tests the same day, while the other half (experimentals) took the second five tests the next day. Comparisons were made on only the last three tests because comparisons on the other two were vitiated by conditions beyond the control of the investigators.

Two methods were used to determine the effects of the difference in schedule of administration:

1. Regression equations were derived on the total group of 1,200 for the prediction of scores on each of the last three tests from scores on the first five tests and membership in group C (control) or group E (experimental). The significance of the beta weight for group membership was then determined, for each of the last three tests.

2. The E and C groups were matched on the three most pertinent of the first five tests, and the distributions were compared on the last three tests.

RESULTS: 1. The beta weight for group membership was significant in the prediction of scores on two of the last three tests.

2. Comparison of the matched groups on the last three tests showed negligible differences between standard deviations. The differences between means were 2.7 score points on Automotive Information

Test, 0.9 on Electrical Information Test, and 2.9 on Radio Information Test, all in favor of the two half-day schedule.

11:15 A.M. Item validity and response change under two different testing conditions. DOUGLAS G. SCHULTZ, *Educational Testing Service*.

PROBLEM: To determine the relationship between item validity and change in response to an attitude-interest questionnaire under selection and nonselection testing conditions.

SUBJECTS: Two successive classes of 350 members each at a women's liberal arts college of an eastern state university.

PROCEDURE: A questionnaire of 328 items inquiring into pertinent attitudes, interests, and motivations of entering college freshmen, was administered to the class of 1951 three weeks after their arrival at college. One hundred and forty-five of the same items were reproduced in a booklet which was administered to the class of 1952 as a part of *normal application for admission*.

The items were provided with four, five, or seven possible responses considered to be on a continuum. A validity index was computed in each class for every one of the 145 common items, using as the criterion freshman grade performance relative to scholastic aptitude. Two kinds of analyses were then carried out: (a) Each item validity index in the class of 1951 (nonselection) was plotted against the difference between the two class mean responses for that item; a similar plot was made with Class of 1952 (selection) validity indices. (b) The change in item validity from one class to the other was plotted against the mean response difference.

Plots were also made substituting the critical ratio of the difference for the mean response difference. All plots were examined and correlation coefficients computed.

RESULTS: (a) There was a very slight tendency (mean $r = .18$) for the largest response changes in the direction indicated as desirable by the sign of the validity coefficient to be associated with items of highest validity. (b) Essentially no association was found between change in item validity from one class to the other and change in mean response. The results are discussed with reference to problems of response distortion encountered in using tests for selection purposes.

11:30 A.M. Comparative effectiveness of spatial-test directions. CHARLES T. MYERS, *Educational Testing Service*.

PROBLEM: It is assumed that the variance of a spatial test may result from two sources of difficulty: difficulty in understanding the directions and difficulty in

solving the problems. If it is desired that the test measure only the ability involved in solving the problems the best directions would be the easiest directions.

SUBJECTS: Two groups of college students with 100 men in each group.

PROCEDURE: Two pairs of spatial tests were prepared. In each pair the tests were identical except for their directions. Pictures were substituted for some of the verbal statements in explaining the sample problems for one test of each pair. The tests with graphic directions were administered to one group of students and the tests with verbal directions were administered to the other group. Another spatial test, which both groups had previously taken, was used as the predictor in an analysis of covariance. The hypothesis to be tested by the analysis was that the slopes of the regression lines would not be equal since it was assumed that the differences in directions would be most influential in the scores at the lower end of the scale. In addition, the results were examined by means of scatter plots.

RESULTS: Each of the tests with graphic directions was slightly easier and had a smaller variance than the corresponding test with verbal directions, but the differences were not statistically significant for this group. Only one of the four tests had no scores below the mean chance score. This test was one of those with graphic directions.

CONCLUSIONS: The results favor the use of graphically presented directions.

11:45 A.M. Modifications of the conventional multiple-choice test item. JOHN SCHMID and PAUL L. DRESSEL, *Michigan State College*.

PROBLEM: To investigate the effects of modifying the structure, directions, and scoring of conventional multiple-choice items upon the working-time per item, test reliability, and discriminating power of items.

SUBJECTS: 449 Michigan State College freshmen and sophomores completing the second quarter of a three-term course in physical science.

PROCEDURE: Five forms of an untimed 44-item achievement examination were prepared. A different form was given to each of five sections, each section consisting of about 90 students. One form was a conventional multiple-choice-item test, each item having a stem and five proffered alternatives, one of which was correct. A second form consisted of this conventional test with modified directions informing the student that although each item had only one correct answer, he might mark as many as necessary to be certain he had not omitted the correct answer. He was informed, also, that his score would be the number of items marked correctly minus one-fourth the number of incorrect answers. A third form was the conventional

test with directions for the student to indicate, using a four-point scale, how certain he was about the correctness of his answer. A fourth form consisted of the same item stems as in the conventional test but having five answers any or all of which might be correct. The fifth form consisted of the conventional items with two correct answers.

RESULTS: The fourth form group worked 20 per cent fewer items in 30 minutes than the students who took the conventional test, suggesting that more of the elements of each item were operating as test stimuli. The reliability estimate of the fourth form was substantially higher than the estimate for the conventional test. A chi-square test showed little evidence that the number of discriminating items varied for the five forms.

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room, Mayflower

VICTOR H. NOLL, Chairman

SYMPOSIUM: IMPLICATIONS OF THE CHICAGO STUDIES OF INTELLI- GENCE AND CULTURAL DIFFERENCES

1:40-3:40 P.M., Tuesday, Congressional Room,
Statler

ANNE ANASTASI, Chairman

Implications from the viewpoint of:

1. One of the principal investigators. KENNETH W. EELLS, *San Diego State College*.
2. A test publisher. ROGER T. LENNON, *World Book Company*.
3. A specialist in psychological measurement. IRVING LORGE, *Teachers College, Columbia University*.
4. A test user in a large city school system. JOHN L. STENQUIST, *City of Baltimore Public Schools*.

BUSINESS MEETING

5:00-6:00 P.M., Tuesday, Congressional Room,
Statler

QUINN McNEMAR, President

DINNER AND PRESIDENTIAL ADDRESS

7:00 P.M., Tuesday, Congressional Room, Statler

QUINN McNEMAR, Presidential Address

SYMPOSIUM: THE SELECTIVE SERVICE COLLEGE QUALIFICATION TEST PRO- GRAM: DEVELOPMENT AND STUD- IES OF OUTCOMES

9:50-11:50 A.M., Wednesday, South American Room,
Statler

LEONARD CARMICHAEL, Chairman

Participants:

J. T. COWLES. Review of the inception and administration of the testing program: its establishment, scope and operational features, relations with Selective Service System and the public.

W. G. FINDLEY. The planning, development, and analysis of the tests: test design, item construction, establishment of difficulty level, pretesting, internal test statistics, and trends in development.

L. R. TUCKER. Statistical studies of test results: score scaling, including standardization of score scale and equating of scores for particular test forms; descriptive statistics for the groups examined; studies of the relation of scores to college grades.

R. L. THORNDIKE. Critical evaluation of program, and summarization of points for discussion.

Discussion among participants and audience.

FACTORIAL STUDIES I

1:40-2:40 P.M., Wednesday, Pan-American Room,
Statler

(Co-sponsored with Psychometric Society.)

LLOYD G. HUMPHREYS, Chairman

1:40 P.M. Interim report on a study of speed factors in tests and in course grades. FREDERIC M. LORD, *Educational Testing Service*.

PROBLEM: To throw some light on the factorial structure underlying the trait or traits commonly referred to as "speed." Is there a general "speed factor"? Or are there different kinds of "speed" corresponding to different kinds of tasks; and how highly correlated are these different kinds of "speed"? How highly correlated are "speed" and power for the same task? How do certain course grades relate to "speed" and how speeded should tests designed to predict these course grades be?

SUBJECTS: Over 700 fourth classmen at the Naval Academy at Annapolis.

PROCEDURE: Twenty-four specially prepared tests were administered to each examinee, as follows: 1-3, Perceptual Speed; 4-5, Arithmetic Operations; 6, Verbal Fluency; 7-12, Intersections (spatial); 13-18, Arith-

metric Reasoning; 19-24, Opposites (verbal). The first six tests represent well-known factors. Each of the last three sets of tests consists of six parallel forms that are equivalent except for the time allowed the examinee per item. The first six tests were highly speeded. For the remaining tests, three out of each six were highly speeded, one was moderately speeded, and two were very unspeeded.

Seven academic grades and three admissions test scores have been included in the intercorrelation matrix (which will ultimately be factor analyzed), together with one or two scores on each of the 24 specially administered tests.

RESULTS: The nature of the speed factors apparent in the correlation matrix is discussed, together with their relation to the academic grades. (Study sponsored by Office of Naval Research.)

1:55 P.M. An analysis of verbal reports of solving spatial problems as an aid in defining spatial factors. ERNEST S. BARRATT, *University of Delaware*.

Twelve hypotheses pertaining to the psychological definition of three space factors recently isolated in factor analytic studies of spatial tests were tested by (a) factor analysis and (b) analysis of verbal reports of the subjects' problem-solving techniques on tests typical of each spatial factor.

Subjects were 84 male students from St. Edwards University, Austin, Texas. Since the investigation involved "over-determined" factors, this population was considered large enough to justify using factor analysis.

The procedure was divided into two main parts: (1) the testing period: a battery of ten paper-and-pencil tests were administered; (2) the personal interview, divided into three intervals: (a) interval during which rapport was established with the subject, (b) interval during which the subject's problem-solving processes were recorded verbatim, (c) interval during which subject answered specific questions regarding his problem-solving procedure.

Test intercorrelations were factor analyzed using a computational method based on the centroid method. Four factors were isolated which, after orthogonal rotations, were identified as a verbal and three space factors.

Problem-solving protocols were analyzed in relationship to hypotheses formulated to clarify the type of ability each of the three space factors represented. Problem-solving techniques were also related to ability on the various space tests.

Briefly, the main results and conclusions were:

1. Analysis of problem-solving protocols provided the basis for an operational definition of the three space factors.

2. The factor analysis failed to reveal smaller groups of subjects who used different problem-solving techniques to arrive at the same solution to the spatial problems, but these groups were revealed by an analysis of the verbal reports.

3. Analysis of problem-solving reports made the interpretation of factor analytic results more meaningful.

2:10 P.M. A factor analysis of selected interest inventories. DONALD V. TORR, *Human Resources Research Center, Lackland AFB*. (Sponsor, Abraham Carp)

PROBLEM: The problem of this study was to determine the factorial content of a correlation matrix of interest inventories considered as representative of available interest measures.

SUBJECTS: A sample of 594 white male United States Air Force airmen undergoing basic training at Lackland Air Force Base was used.

PROCEDURE: Tetrachoric intercorrelations were obtained for 49 variables including those from the Thurstone Interest Schedule, Guilford-Schneidman-Zimmerman Interest Survey, Brainard Occupational Preference Inventory, Lee-Thorpe Occupational Interest Inventory (as modified for this analysis), Texas Occupational Interest Analyzer (experimental), Biographical Inventory after Sims (an adaptation of the Sims Score Card for Socio-Economic Status), and the Masculinity-Femininity scale of the Strong Vocational Interest Blank for Men. The correlation matrix was factored by Thurstone's centroid method and the resultant factors were rotated to psychological meaningfulness.

RESULTS: Twelve factors were extracted. After rotation six factors were given tentative definition as "interest in mechanics," "interest in people," "interest in esthetics," "interest in science," "interest in nature," and "interest in business." Two additional factors were uniquely determined by variables from two separate inventories, factor V by the *Interest Schedule* and factor VIII by the *Interest Survey*. A tentative hypothesis to be tested attributes these factors to the operation of response sets. The remaining four factors did not have a sufficient number of significant loadings to permit even tentative definition.

CONCLUSIONS: Interest variance present in a representative selection of interest measures can be reasonably well accounted for by six psychologically meaningful factors.

2:25 P.M. A factor analysis of the Wechsler-Bellevue Intelligence Scale, Form I, in a matrix with reference variables. PAUL C. DAVIS, *University of Southern California*.

PROBLEM: The purpose of this study was to investigate

the factor composition of the Wechsler-Bellevue in terms of factors that have been identified by previous research.

SUBJECTS: A total of 356 students in grade 8A were tested. The group was approximately half male and half female, and ranged in age from 12 to 16.

PROCEDURE: Eleven group tests were administered to all Ss. Eleven subtests of the W-B were administered to 202 of the group. School records yielded age and Otis Beta scores. All scores were transformed into stanine scores and intercorrelations were computed.

Means and standard deviations on the 13 group variables were compared, and the hypothesis of homogeneity of subgroups (202 and 154) was found to be tenable. The intercorrelation matrix was factored by Thurstone's complete centroid method and the resulting factors rotated to orthogonal simple structure.

RESULTS: Eleven factors were extracted. Ten of these were interpreted as follows: verbal comprehension, visualization, numerical facility, mechanical knowledge, general reasoning, fluency, perceptual speed, education of conceptual relations, information, and a doublet on two similarities tests. Identification of the fluency and information factors is tentative.

CONCLUSIONS: Wechsler-Bellevue subtests in general are factorially complex. The vocabulary and arithmetic tests have the largest proportion of variance attributable to a single factor (verbal comprehension and general reasoning, respectively). The scale appears to have appreciable variance in at least five of Thurstone's primaries. The fluency factor as defined in this analysis seems to resemble the type of non-intellective factor that Wechsler considers important. For this age group, the mechanical knowledge (or experience) factor is broader and less well defined than for adults. A symbol manipulation hypothesis regarding the numerical factor, previously proposed by others, tends to be supported by the present findings.

The major hypothesis subjected to test was that a regression equation computed from a matrix of common factor loadings will give a closer approximation to a criterion score in a new sample from the same population than will a conventional least squares regression equation. The rationale for this is that, since the number of factors is ordinarily less than the number of independent variables in the system, fewer degrees of freedom will be lost, and if N remains the same, the standard errors of the regression weights will be smaller. Subjects were 1,698 entering college students. Scores were obtained on eleven conventional aptitude tests, age, and cumulative grade point average at the end of three quarters of residence. Random samples of size 30 and 200 were drawn from this population and regression equations computed by conventional least-squares method and from a centroid factor matrix. Comparison of cross-validation multiple correlation coefficients computed from the two kinds of regression equations on the remaining 1,468 cases resulted in significantly higher cross-validity from the common factor regression weights for the sample of size 30, but not for the sample of size 200. The explanation of the failure of the hypothesis to hold for the larger sample is that the shrinkage of the multiple correlation was not significant for a computing sample as large as 200. The procedure is presented as a method of overcoming the problem of shrinkage of cross-validation correlations which is especially troublesome when the computing samples are small.

3:05 P.M. The selection of standard tests for factor analysis. JOHN W. FRENCH, *Educational Testing Service*.

PROBLEM: Factor analysis as a method for analyzing tests has been greeted with tremendous enthusiasm, but there is an alarming tendency for the accumulating findings to confuse rather than to clarify our knowledge of tests as measuring instruments. One reason for confusion is the fact that a test can measure very different things when administered to widely different groups of people. Another reason for confusion is that factor analysts use different tests, so that one cannot be sure that a cluster of high intercorrelations involving certain tests in one study is evidence for the same factor as a cluster involving certain similar tests in another study. It depends on how similar those tests really are.

PROCEDURE: In November 1951, Educational Testing Service held a 3-day conference of 14 persons who are actively engaged in factor problems. One product of this conference was the initiation of the project of selecting three tests for each factor that seems to have some substantiation in past researches. Overlapping committees of three each were assigned to work on

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room,
Mayflower

FACTORIAL STUDIES II

2:50 P.M. The use of common factor loadings in a
Staller

(Co-sponsored with Psychometric Society.)

ALBERT K. KURTZ, Chairman

2:50 P.M. The use of common factor loadings in a
multiple regression system. JOHN M. LEIMAN,
Human Resources Research Center.

the selection of tests for each of 18 factors. It was desired that tests for several age or educational levels would be selected where needed. Use of these standard tests to mark the known factors in future studies should make easy the cross-identification of factors from study to study and should facilitate the interpretation of new factors.

This paper will discuss the background and procedure for this project. It will report the success achieved in agreeing upon standard tests for factors and will explain the availability of these tests for factorial research.

3:20 P.M. Differentiation of group patterns by inverted factor analysis. BOM MO CHUNG, *University of Chicago*. (Sponsor, George G. Stern)

Factor analytic investigation is customarily concerned with determining the simplest factorial structure accounting for the total variance among a group of tests. When the sample of persons for whom the factor pattern obtains is more properly represented in terms of several subgroups sharing different aspects of the factor pattern among tests, the test factors will be of limited usefulness for predictive purposes, unless the existence of the separate subgroups is taken into account.

Inverted analysis (Q-technique) has been suggested as an alternative technique for the extraction of clusters of persons, rather than tests. An empirical study of data incorporating both test and person factors was undertaken in order to determine if (a) R-technique would yield factors restricted to test variation, (b) Q-technique would yield factors restricted to person variation, and (c) if Q-technique would distinguish persons within subgroup patterns.

Twelve boxes, representing sets of cubes, columns, and platforms, were chosen and measured in fifteen different ways. Centroid solutions were obtained for the respective R- and Q-matrices. R-technique yielded three factors identified as length, width, and depth. Q-technique distinguished two factors, the first essentially bipolar representing cubes and platforms, the second representing columns. It also distinguished boxes within groups in terms of factor loadings, conforming to physical differences within each subgroup. Similar analysis is now being made with data obtained from genetics.

The significance of this study lies in its examination of the plausible supposition that factorial composition and its meaning depends on characteristics of both tests and groups, and that R- and Q-techniques yield differential information in this regard. Where the existence of patterns can be established, predictability from factorial composition should be enhanced.

3:35 P.M. The orthogonal approximation of an oblique structure in factor analysis. BERT F. GREEN, JR., *Massachusetts Institute of Technology*.

PROBLEM: In factor analysis problems it is common practice to rotate the factor matrix to positive manifold or simple structure by means of oblique transformations. Although this use of correlated factors is widespread, some workers prefer to use orthogonal reference frames. Also, when the results of the analysis are to be used in further mathematical formulas, such as in estimating factor scores, or in deriving multiple regression weights, orthogonal factors represent a simplification.

Thus the problem has arisen of finding a set of orthogonal reference vectors which closely approximate a given oblique structure.

RESULTS: Three methods are presented by which such an orthogonal reference frame can be determined analytically. These methods are all special cases of a more general problem of a "best-fitting" orthogonal transformation. For the factor analysis problem the first method minimizes the sum of squared differences between oblique and orthogonal factor loadings. This solution depends on the size and distribution of test vectors in the configuration. The second method maximizes the sum of cosines between corresponding reference and orthogonal axes. The third method maximizes the sum of cosines between corresponding primary and orthogonal axes. Arbitrary weights may be introduced in each method. The case is considered in which some of the axes are fixed in advance and the others are to be determined by the analytic methods.

The relative merits of the three methods are discussed.

TEST APPLICATIONS

8:40-9:40 A.M., Thursday, Pan-American Room, Statler

WALTER N. DUROST, Chairman

8:40 A.M. Speed as a factor in the decline of performance with age. MILTON S. GURVITZ, *Hillside Hospital*.

PROBLEM: Performance on intelligence tests declines with increasing age of subjects. It has been noted that verbal tests appear to decline at a lower rate than performance tests. Is this decline a function of the nature of the test material or is it due to the fact that most verbal tests were usually untimed while the performance tests were timed.

SUBJECTS: 896 cases from Wechsler's standardization population aged 20-49; 1140 cases from the standardization population of the Revised Beta and 1773 cases

from the standardization population of the Revised Alpha aged 20-49. In all three groups the samples approximated the general population through the criteria of occupation status, or education, or both.

PROCEDURE: Performance subtests of the Wechsler are timed, while verbal subtests are untimed in general. The Alpha approximates the verbal subtests of the Wechsler but is timed while the Beta is a timed performance test. Rates of decline were established for the various tests from 20-24 to 45-49 years with the results expressed in terms of per cent of the 20-24 age group corrected for an equal zero point to make the per cents comparable.

RESULTS: While the Verbal Wechsler declined only 11%, the Performance declined 28% and the Beta declined 23% and the Alpha 22%.

CONCLUSIONS: Speed plays an important factor in determining the rate of decline of performance with age. Unspeeded tests are much easier for older individuals as compared with speeded tests and this seems to hold true whether verbal or performance materials are employed. Older individuals, then, will suffer a disabling decline in the *speed* of performance when the *quality* of the performance is still adequate.

8:55 A.M. Comparison of essay and objective examinations in medical subjects. JOHN T. COWLES and WILLIAM H. ANGOLF, *Educational Testing Service*.

Under a grant from the John and Mary R. Markle Foundation, the National Board of Medical Examiners has been undertaking the improvement of its long-established essay examinations given to medical students after two years and after four years of training. Educational Testing Service has carried out a pilot study involving the development of new 90-minute objective tests in pharmacology and internal medicine and the direct comparison of those tests with essay examinations administered during the same testing session.

In this paper are briefly described the procedures used in constructing and administering the trial examinations and in validating both essay and objective tests against external criteria. For each subject field, data are presented from a sample of about 600 students taking both types of test. These data reveal the superiority of the objective test over the essay test as a proficiency measure. Other statistical characteristics of the new tests are described, such as difficulty level, speededness, reliability, and distribution of scores, as well as the correlation between essay and objective test scores. By means of the discriminant function, weighted composites were derived from essay and objective scores in each subject. These composite scores were then converted to a percentage-type

scale yielding specified proportions of honor, pass, and failing grades in accordance with proportions reported during previous years of essay tests.

Encouraged by the favorable outcomes of this initial study, the National Board is now converting all eleven of its written examinations into the newer objective forms. The pharmacology and internal medicine objective tests have meanwhile been carefully revised after item analyses, and the revised forms have been resubjected to analysis after administration. Results of this analysis are reported.

In conclusion, implications of this project for evaluating important aspects of medical education are discussed.

9:10 A.M. Types of tests and their uses in college testing programs. ANNA DRAGOSITZ and BARBARA MCCAMBRIDGE, *Educational Testing Service*. (Sponsor, Anna Dragositz)

Questionnaires from 624 liberal arts colleges, universities, technical and professional schools, junior colleges, and teachers colleges were analyzed to determine the extent to which different types of tests are being used in college testing programs and the purposes for which they are being administered. Responses were classified according to the types of tests reported and the purposes for which the results are being employed. The responses were analyzed for the group as a whole as well as by geographic locations, types of colleges, and methods of legal control.

The results show that two types of tests—scholastic aptitude (81%) and achievement (74.6%)—are being used for three major purposes—guidance (72.6%), placement (44.9%), and admissions (23.4%). It was further noted that groups of colleges which reported the use of scholastic aptitude and achievement tests less often than colleges in general, reported the use of personality scales and interest inventories more frequently. The reverse also obtained. Differences among colleges in the frequency with which specific types of tests are employed were most striking when responses were considered by type of college rather than by regional location or method of legal control. One notable difference in the types of tests employed and in the uses made of test results was in the technical and professional schools which reported the use of achievement tests considerably less often than did colleges in general.

Emphasis in testing at the college level is apparently placed on the evaluation of academic abilities rather than the evaluation of personal factors. It would seem that these factors are either not being systematically evaluated in most colleges, or they are being evaluated by means other than tests. Further investigation might be directed toward the rela-

tively infrequent use of personality tests and other measures of special abilities at the college level. Have colleges found these instruments inadequate for their needs or are they just not concerning themselves with the evaluation of personal characteristics?

9:25 A.M. Test users' problems in the selection and use of tests and in the interpretation of test results. BARBARA McCAMBRIDGE and ANNA DRAGOSITZ, *Educational Testing Service*. (Sponsor, Anna Dragositz)

The purpose of this study was to investigate the nature of the questions on which present and potential test users seek advice in order to determine the types of problems which frequently occur in test selection, use, and interpretation.

Over 2,500 letters received from personnel in high schools, colleges, guidance clinics, industrial organizations, governmental agencies, and from private individuals were grouped according to the types of questions raised by teachers and administrators at various academic levels and by personnel in different types of non-educational organizations. They were also classified by the geographic regions from which they originated.

In addition to requests concerned with specific Co-operative Tests and their related materials, the inquiries received could be classified into three major categories: (a) the availability of tests for school-wide testing programs at various academic levels, specific subject-matter areas, defined academic levels, and special measurement purposes; (b) technical information on the content and standardization of specific tests; and (c) interpretation of results in local

situations. The types of questions raised indicate a wide variation in the sophistication of present and potential users, concerning general and specific information on test usage. A need is indicated for the systematic investigation of the types of verbal and pictorial materials which will most effectively present both the instruments which are available for various purposes and the current concepts and procedures in measurement to the average test user who is not likely to be a highly trained specialist in this field.

SYMPOSIUM: MEASUREMENT OF SPATIAL ABILITIES

9:50-11:50 A.M., Thursday, Pan-American Room, Statler

(Co-sponsored with Psychometric Society.)

BENJAMIN FRUCHTER, Chairman

Participants: LLOYD G. HUMPHREYS, WILLIAM B. MICHAEL, WAYNE S. ZIMMERMAN

SYMPOSIUM: RECOMMENDATIONS OF THE MID-CENTURY COMMITTEE ON OUTCOMES IN ELEMENTARY EDUCATION—THEIR IMPLICATIONS FOR RESEARCH IN EDUCATIONAL PSYCHOLOGY AND CHILD DEVELOPMENT

1:40-3:40 P.M., Thursday, Federal Room, Statler

(Co-sponsored with Divisions 7, 15, and 16.
See Division 15's program.)

DIVISION ON CHILDHOOD AND ADOLESCENCE

EXECUTIVE COMMITTEE MEETING

9:50-11:50 A.M., Monday, Jefferson Room, Mayflower

SYMPOSIUM: THE INTERACTION OF RESEARCH AND CHILD REARING PRACTICES

9:50-11:50 A.M., Monday, Presidential Room, Statler

RUTH UPDEGRAFF, Chairman

Participants: J. R. WITTENBORN, MYRTLE ASTRACHAN, ELLERY C. RUSSEL, DELOS WICKENS, NORMAN POLANSKY

SYMPOSIUM: HUMAN LEARNING: THEORY AND PRACTICE

1:40-3:40 P.M., Monday, Ballroom, Mayflower

(Co-sponsored with Divisions 15 and 16.)

IRVING LORGE, Chairman

Participants: JULIAN ROTTER, MORRIS KRUGMAN, JOEL DAVITZ

SYMPOSIUM: SOCIALIZATION IN CROSS-CULTURAL PERSPECTIVE

4:00-6:00 P.M., Monday, Presidential Room, Statler

(Co-sponsored with Divisions 8 and 9.
See Division 8's program.)

SPECIAL SESSION: WORK GROUPS IN RESEARCH IN CHILD DEVELOPMENT

8:40-10:40 A.M., Tuesday, Jefferson Room, Rooms
260 and 237/8, Mayflower

Research work groups are being sponsored by the Clearinghouse for Research in Child Life of the U. S. Children's Bureau and Division 7. The basic purpose of these meetings is to enable persons who are working on similar problems to get together to discuss common concerns relating to methodology, theory, etc., and if possible, to coordinate their research efforts. Topics to be considered are: sibling relations, social prejudice, juvenile delinquency. Participation is limited to a small number. Persons interested in participating should so indicate before the meetings by writing to Leon Yarrow, U. S. Children's Bureau, Federal Security Agency, Washington 25, D. C.

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room,
Mayflower

VICTOR H. NOLL, Chairman

BUSINESS MEETING AND PRESIDENTIAL ADDRESS

8:00 P.M., Tuesday, Chinese Room, Mayflower

WAYNE DENNIS. Animism in Children and Adults.

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room,
Mayflower

CHILD DEVELOPMENT I

8:40-9:40 A.M., Thursday, Congressional Room,
Statler

HAROLD SKEELS, Chairman

8:40 A.M. The relationship of certain television heroes to the "ideal-self" of the child. NORMAN YOUNG, Teachers College, Columbia University.

PROBLEM: What do television heroes represent to the child? What is the relationship of the child's self and ideal-self to his conception of television heroes, famous individuals and his parents?

SUBJECTS: 25 children, 8 to 10 years of age.

PROCEDURE: Using a modified Stephenson "Q-sort," each child was asked to rank some statements as they pertain to himself, the television heroes, the President, his parents and his "ideal-self," i.e., what he would like to be in reference to the statements. They also ranked these people in reference to each other according to whom they like best.

RESULTS: There is definite difference in ranking individuals and the correlation rankings of the individuals with "ideal" in the Q-sort. Parents correlated consistently less with the ideal-self than the President, or the television heroes, although the parents were liked best. Television heroes correlated very significantly with ideal-self.

CONCLUSION: Children attribute what they feel is ideal to television and related heroes, although there is little evidence to show that these ideals are manifested by the heroes in their roles. This may indicate a strong identification of learned morality with the heroes. It is inferred that a reciprocal relationship may exist wherein children are in turn influenced by these "ideal heroes." A further, more comprehensive study is planned.

8:55 A.M. Personality characteristics of schizophrenic children viewed through the Rorschach test. WILLIAM N. THETFORD, Formerly, Research Clinical Psychologist, Michael Reese Hospital.

PROBLEM: The problem of the adequate formulation of what constitutes the schizophrenic process is particularly intensified when studying the personality reactions of children. The purpose of this paper is to highlight those aspects of the personality characteristics of schizophrenic children which are deviant from normal and neurotic children. It is oriented about those aspects of schizophrenic intellectual activity, autistic behavior, affective reactions, and a variety of other personality components as they are revealed by the Rorschach method of personality investigation.

SUBJECTS: The Rorschach records of fifty children between the ages of six and seventeen who had previously been diagnosed as schizophrenic constitute the experimental group for this investigation. A base line for comparison with the schizophrenic records is afforded by a control group of 155 normal and 50 neurotic children.

PROCEDURE: The Rorschach test records of these three groups have been subjected to a thorough analysis. The discussion considers those Rorschach signs which have differentiated between the schizophrenic children's group and either of the other two control groups. An inspection of each of the Rorschach signs precedes a synthesis of the data into a pattern characteristic for the members of the schizophrenic children's group as a whole.

RESULTS AND CONCLUSIONS: Intellectually, the schizophrenic child is characterized by perceptual inaccuracies and by an inability to establish adequate intellectual rapport with the outer world. Communicating primarily in terms of his private inner world, the conformity aspects of his personality are pronouncedly deviant. The unevenness of his intellectual functioning is consistent with the unpredictability of his behavior. Affectively, he reacts to stimulation in a primitive impulsive fashion with complete loss of ego control more frequently than do his healthier age mates. Feelings of inferiority and melancholy are also more characteristic of the schizophrenic child. He attempts to cope with his strong personal needs through the use of fantasy. The basis for, and implications of, these findings are discussed.

From the Psychology Laboratory of the Institute for Psychosomatic and Psychiatric Research and Training in the Michael Reese Hospital, Chicago, Dr. S. J. Beck, Principal Investigator. This investigation was supported by a Research Grant from the National Mental Health Institute, Public Health Service, Federal Security Agency.

9:10 A.M. Motor performance of cerebral palsied children as a function of success or failure in securing material rewards. **JESSE G. HARRIS, JR.,** and **NORMAN GARMEZY,** *North Carolina Cerebral Palsy Hospital and Duke University.* (Sponsor, Norman Garmezy)

PROBLEM: Many chronically handicapped children often lack the motivation and interest which is necessary for developing self-help skills. The present study sought to evaluate the effect of success and failure in securing material rewards on the cerebral palsied child's speed of performance on a prefunctional type activity. Material rewards were selected because these (a) have been successful in improving the motor performance of nonhandicapped Ss, presumably by modifying the motivational level; (b) permitted an evaluation of the differential responsiveness of handicapped children to experimentally induced success and failure.

SUBJECTS: 18 cerebral palsied children approximately equated for type and extent of handicap, hospital adjustment, and initial test performance.

PROCEDURE: Ss placed pegs into a series of holes on a wooden peg board for four trials daily for 15 days. Four Ss each were tested under 3 experimental conditions: (a) Neutral group (N) was motivated throughout by verbal praise alone, (b) Success-Reward Group (R) was motivated by verbal praise plus the attainment of candy rewards, (c) Success-Failure Group (F) was distinguished by verbal re-

proof and loss of candy rewards. The R and F groups were trained under the neutral condition for days 1-3, 7-9 and 13-15 and under success or failure respectively for days 4-6 and 10-12. Several Ss were also tested under prolonged success and failure (days 4-12). Speed of performance was the response measure employed.

RESULTS: 1. N group subjects showed little modification in performance throughout the practice trials.

2. Both R and F subjects improved in performance during the success and failure trials but these effects did not generalize to subsequent N trials.

3. Under prolonged success and failure there was initial improvement in performance followed by a performance decrement.

Limitations and possible implications of these results will be discussed. (Slides)

CHILD DEVELOPMENT II

9:50-10:50 A.M., Thursday, Congressional Room, Statler

JACOB GEWIRTZ, Chairman

9:50 A.M. The sucking reflex: Effects of long feeding time vs. short feeding time on the behavior of a human infant. **THEODORE H. BLAU** and **LILI R. BLAU,** *Pennsylvania State College.*

PROBLEM: To observe systematically the effects of varied feeding time on nonnutritive sucking and other behavioral variables of a three-week-old infant.

PROCEDURE: The subject was placed on a demand-schedule of feeding from the third week through the seventh week of age. During this period of time, two experimental conditions were introduced. Condition A provided that the infant be given milk in a bottle with a standard two-hole rubber nipple. Condition A was called "slow feeding." Condition B provided that the infant be bottle-fed using standard two-hole rubber nipples with an additional six holes in each nipple. Condition B was called "fast feeding." An ABAB grouping design was used in varying the experimental conditions.

During the four weeks of the experiment, the infant was observed in a constant and consistent manner. Rating scales with high interjudge reliability were used to measure a number of behavioral variables including nonnutritive sucking, crying, regurgitation, and general activity.

RESULTS: Examination of the data indicated that during the "fast feeding" conditions there was less nonnutritive sucking, regurgitation, crying, general activity, etc., than during the "slow feeding" conditions. These results were consistent for the time immediately

after feeding and for the time between feedings. These results were also consistent for repeated series of conditions A and B.

CONCLUSIONS: Although this investigation represents little more than a very detailed case study, the results appear to be consistent enough to indicate a definite need for objective research on the theory that there exists in infants an innate need for oral-erogenous gratification.

10:05 A.M. Some relations between techniques of feeding and training in infancy and certain behavior in childhood. **ARNOLD BERNSTEIN**, *College of the City of New York*.

PROBLEM: An empirical test of the general hypothesis that experience during infancy can produce demonstrable behavioral consequences in later life. Two subordinate hypotheses derived from the psychoanalytic theory of psychosexual development were tested: (a) oral reinforcement during infancy will affect behavior in later childhood, and (b) coerciveness of bowel training during infancy will affect behavior in later childhood.

SUBJECTS: 50 children between 47 and 68 months of age who have attended a well-baby clinic since shortly after birth.

PROCEDURE: Data were gathered from three sources: (a) a play interview with the child, (b) an interview with the mother, and (c) medical records of a well-baby clinic.

RESULTS: (1) The hypothesis that reinforcement increases the strength of oral drive during infancy was supported by the findings. (2) The hypothesis that thumbsucking is due to sucking deprivation during infancy was not supported. (3) The possibility that thumbsucking may, in part, be due to reinforcement of oral drive during infancy was suggested. (4) Using a food choice during childhood under controlled conditions, it was demonstrated that the selection of the sucking choice bore a significant relationship to the amount of sucking reinforcement in infancy. (5) A relationship was found between amount of sucking reinforcement and tendency to be constipated. (6) An inverse relationship was found between amount of sucking reinforcement and the tendency to collect objects in later childhood. (7) The hypothesis that the tendency to collect objects is directly related to constipation was rejected. (8) Using fourfold contingency tables, it was found that a relationship significant at the .05 level existed between coercive toilet training and separation anxiety, negativistic behavior, uncommunicativeness, and immaturity in the experimental play interview. (9) No relationship was found between coercive toilet training and collecting, constipation, or response to smearing tests.

10:20 A.M. A comparison of the psychological environments two communities provide for children. **WILLIAM A. KOPPE**, *University of Kansas*. (Sponsor, Roger G. Barker)

Two rural towns, population 715 and 355, are compared with respect to the psychological conditions they provide for their children. This is done in terms of the construct *behavior setting* which is defined as a commonly discriminated part of the community that is generally perceived by the residents as having attributes that coerce behavior. Behavior settings are identified via publications (newspapers, school publications, church programs, announcements, etc.), interviews with informants and observations. A measure of the relative importance of a behavior setting for children is based upon the average number of hours per year children spend in a setting. The settings of the two towns are analyzed according to their importance for the children, their structural characteristics and their psychological attributes as perceived by the citizens.

Findings indicate that the behavior settings of the smaller town have greater educational and religious significance for children than those of the larger town; those of the larger community have a greater range of psychological attributes, they are more specialized and they operate more frequently to segregate the people of the larger town into age, sex and social class groups.

It is concluded that the concept of behavior setting is a promising tool for community analysis by providing a means of assessing some features of the social psychological living conditions a community provides for its children or other segments of its population.

RESULTS: It was found that the partially reinforced groups were very significantly more resistant to extinction in this situation than was the continuously reinforced group. The group that had never received reinforcement was not significantly different in resistance to extinction from the group that had been continuously reinforced during acquisition. A reinforcement theory interpretation of the results was made, and it was decided that the concept of partial reinforcement seemed to have a considerable degree of explanatory power on this molar level.

10:35 A.M. Problems of the self and social development. **THERON ALEXANDER**, *Florida State University*.

PROBLEM: Does having high social status mean that a child is effectively meeting problems of development?

SUBJECTS: 27 children with an age range of nine years to ten years and three months and a mean age of nine

years and one month. The group consisted of 16 girls and 11 boys. This paper is one report on research carried on under a grant from the University Research Council and the Department of Psychology.

PROCEDURE: The children were given a series of tests including the Thematic Apperception Test, Rorschach, and Stanford-Binet. Other techniques were: observations, puppet play, physical activities, and family interviews. Certain children were given psychotherapeutic experiences. Social status was determined by sociometric data and life-situational choices.

Categorical divisions of a framework for obtaining characteristics of the self as a basis for behavior were: (a) organization of response, (b) emotional behavior, and (c) predominant conflict area. After analysis the data were organized in the following divisions: (a) subject's view of external forces and concept of self, (b) interpersonal relationships, and (c) needs.

RESULTS: It was found that the child with the highest social status had serious problems of adjustment.

CONCLUSIONS: It must follow that high social status does not necessarily indicate that a child is effectively meeting his developmental tasks or that he has personality characteristics which are to be emulated. Important questions grow out of this study: (a) does the fact that a child fits into the various personality patterns of all or most group members mean that his totality of personality can appeal only to certain common needs of the other members, and (b) are we confronted with the view that either extreme of social status may be detrimental to the development of the child?

CHILD DEVELOPMENT III

11:00-11:45 A.M., Thursday, Congressional Room, Statler

E. LAKIN PHILLIPS, Chairman

11:00 A.M. Influence of social class upon performance on Draw-A-Man Test. JOSEPH H. BRITTON, *Pennsylvania State College*.

Previous research on 325 Indian children of the Sioux, Hopi, Zuni, Zia, Navaho, and Papago tribes in nine communities has shown that environment affects the performance of children on the Goodenough Draw-a-Man Test. To discover the degree of the relationship between social class membership and performance on standardized group tests and between social status and scores on the Draw-a-Man Test is the problem of this investigation.

Subjects for the study were 136 girls and 101 boys whose social status in their midwestern community had been determined by using Warner's Index of

Status Characteristics. Standardized verbal and non-verbal group tests of intelligence were administered to these 10-, 11-, and 12-year-olds, and the test scores were correlated with the social status scores (I.S.C.'s). Similarly, the children were asked to "draw the best man you can" and these drawings were scored on the Goodenough scale; the resulting IQ's were correlated with the social status ratings.

Results are presented which indicate that within these groups of children low, positive relationships exist between the scores on the standardized group tests and social status. In these tests it appears that the higher the social status level the greater the test score. In general these results substantiate those of other investigators, *vis.*, Allison Davis and associates. When scores on the Draw-a-Man Test are correlated with ratings of social status there appeared little or no relationship.

If tests are to be used to assess fairly the intellectual behavior of children in all social classes, the cultural biases of tests and testing procedures must be eliminated. The Draw-a-Man Test appears to be of some value in the assessment of intelligence relatively free from social class bias.

11:15 A.M. Intercorrelations of the Primary Mental Abilities Tests for ten-year-olds by socioeconomic status, sex, and race. S. OLIVER ROBERTS and JAMES M. ROBINSON, SR., *Fisk University*.

The present paper deals with one phase of a comprehensive psychological study of a southern urban group of ten-year-olds.

PROBLEM: A previous investigation revealed substantial class and race differences for the Primary Mental Abilities subtests. The purpose of this study was to examine the intercorrelations of these subtests within the differential factors of socioeconomic status, sex, and race.

SUBJECTS: 200 ten-year-olds divided equally into eight subgroups of 25 each by two socioeconomic levels (Minnesota Occupational Scale), sex, and race (white and Negro American).

PROCEDURE: Three hundred children had been given the Elementary Form (ages 7-11) of the PMA Test. Subjects were removed at random from the original subgroups to secure the equal cells used in this study. Rho's were computed for the principal subtests of this instrument and were compared with the intercorrelations obtained by Thurstone for pupils 9-9.5 years old.

RESULTS: In general, the results tended to show considerable differences by race, and somewhat less by class and sex. As an illustration, the correlations of the test of Perception (P) with Verbal-Meaning (V) may be cited. These tests represent examples of the

least and the most culturally saturated tasks in the battery. In this instance, the intercorrelations were in the $+.50$'s for the white American subsamples, while they were in the $+.20$'s for the Negro American subsamples; Thurstone reported $+.420$ for his group.

CONCLUSIONS: The results indicate that the patterns of mental abilities may differ for such subgroups as were employed in this investigation. Therefore, the theoretical importance of this approach for the analysis of ethnic and cultural differences in intelligence will be considered.

The total study has received support from the Field Foundation and the Children's Bureau-Federal Security Agency.

11:30 A.M. A comparison of the play activities of urban children and adolescents after some twenty-five years. MILDRED C. TEMPLIN, *University of Minnesota*.

PURPOSE: This study compares the similarities and differences in play activities of urban subjects in 1950 with those studied by Lehman and Witty in 1923-24.

SAMPLE: The sample includes 3,000 Minneapolis subjects selected to form a representative sample of 150 boys and 150 girls at each age level from 8 through 17, and about 400 Kansas City subjects selected as a geographic control for the Lehman and Witty urban subjects.

METHOD: A revised form of the Lehman Play Quiz was administered in February 1950. For each case the total number and the specific activities engaged in, the favorite, the most time consuming activity, and solitary, competitive, strenuous and antisocial activity indexes were determined.

RESULTS: 1. At each age, boys and girls today engage in a greater number of different activities.

2. Consistent with the Lehman and Witty findings: (a) the number of play activities decreases with age; (b) the form of the decrease curve is similar; (c) boys engage in more activities than girls; (d) the proportion of solitary activities increases slightly with age.

3. In comparison with the Lehman and Witty study, the present study shows: (a) much similarity in activities most commonly engaged in, best liked, and consuming most time; (b) an increase in the rank of spectator and adult organized activities in these three classifications; (c) about twice as many activities engaged in by at least 25 per cent of all subjects. Of those reported by Lehman and Witty three-fourths are included.

4. With increasing age, the proportion of anti-social activities increases and the proportion of competitive and strenuous activities decreases.

CONCLUSION: Over about a twenty-five year span, sex differences and age trends in play activities have remained relatively constant, but the total number of activities and the frequency of spectator and adult organized activities have increased. (Slides)

SYMPOSIUM: RECOMMENDATIONS OF THE MID-CENTURY COMMITTEE ON OUTCOMES IN ELEMENTARY EDUCATION—THEIR IMPLICATIONS FOR RESEARCH IN CHILD DEVELOPMENT AND EDUCATIONAL PSYCHOLOGY

1:40-3:40 P.M., Thursday, Federal Room, Statler

(Co-sponsored with Divisions 5, 15, and 16.
See Division 15's program.)

DIVISION OF PERSONALITY AND SOCIAL PSYCHOLOGY

PROCESSES IN SMALL GROUPS I

9:50-10:50 A.M., Monday, South American Room, Statler

LAUNOR F. CARTER, Chairman

9:50 A.M. A method for describing the emotional life of a group and the emotional needs of group members. JOSEPH H. MCPHERSON, *University of Chicago*.

Using the theoretical framework suggested by Dr. W. R. Bion, a set of four categories (modalities) has been developed for: (a) predicting individual behavior

in a group, (b) for observing individual behavior in a group, and (c) for studying the emotional life of a group. Three of these categories were used to differentiate the emotional needs of a group ("group mentality") and the emotional "valencies" of individuals. The three are: (a) "Fight-flight," the need of a group to escape the work task either by fighting it or running away from it; (b) "Pairing," the need of a group to seek security by establishing pair relationships; and (c) "Dependency," the need of a group to remain dependent upon the leader. The fourth category was the "work" category, the need of a group to engage in problem solving activity.

A class of 28 graduate students was selected for study. Using interview data the class was divided into heterogeneous subgroups. One subgroup was selected for intensive study. Each member of the subgroup was given a sentence-completion test and a modified form of the TAT. These two tests were scored according to "signs" toward each of the categories (modalities). From these data the "modality" operation of each individual was predicted.

All group meetings were electrically recorded. Each verbal statement was classified into one or more of the four categories. Three types of data treatment were used: (a) the number of statements each individual made in each category was computed for each meeting (16 meetings), (b) a pattern was drawn for each meeting to show the sequence of modality occurrence, and (c) the relationship between individual behavior and group behavior was observed. When the pattern of behavior for each meeting was drawn, the points where the group left the work task, where it entered a "dependency" phase, etc. was noted and at these points the individual who led the group into the behavior was observed.

The general conclusions were: (a) The emotional life of a group can be effectively described using the four modalities. Such descriptions permit differentiation of group meetings according to productivity, and according to emotional orientation. (b) The application of these categories in analyzing the two projective tests was extremely useful in qualitative description and prediction but less useful in quantitative description and prediction. (c) Individual members of a group can be differentiated according to "valency" toward the emotional modalities and "work" orientation.

10:05 A.M. Problem solving by small groups under varying conditions of personality and organization. HERBERT W. EBER, *University of North Carolina*. (Sponsor, Harold G. McCurdy)

PROBLEM: The experiment was designed to test the effect of two factors on the efficiency of problem solving requiring genuine cooperation by small groups. These factors were: (a) the organization of the group—whether democratic or authoritarian, and (b) certain personality traits of the members likely to predispose them toward greater efficiency under one or the other type of organization.

PROCEDURE: The "F-scale" developed by Adorno *et al.* for their study, *The Authoritarian Personality*, was administered to 114 students of elementary psychology. Extreme scorers were selected and placed in groups of three, so that there were twelve "authoritarian" groups, matched into six equivalent pairs, and like-

wise, twelve "democratic" groups, matched into six equivalent pairs. Thus 24 groups were used, six of each personality type under the democratic condition, and their paired companions under the authoritarian one.

RESULTS: The "authoritarian" persons under the democratic condition made significantly more errors per time than any other groups. However, using other criteria, such as correct production per time, errors to criterion, etc., they do not appear significantly different from the others within the limits of the problem solving period. It is suggested that this might be explained by the following hypothesis, which is to be considered as a suggestion for further research:

While anyone *can* work in an authoritarian situation, working in a democratic one involves a special technique, such as the ability to communicate successfully with others. Thus "authoritarian" persons, who are presumably deficient in this technique, achieve just as much correct production, but make significantly more errors when working under a democratic organization. Under an authoritarian one, they do well, since no special technique is required. The "democratic" persons do well either way, since they have the technique and can use it when necessary. (Slides)

10:20 A.M. Changes in interpersonal perceptions associated with group interaction. RICHARD M. LUNDY and JAMES BIERI, *Ohio State University*. (Sponsor, George A. Kelly)

PROBLEM: This paper reports the results of two studies each dealing with the general problem: How does the way we perceive another person change as a result of interacting with that person?

Hypothesis 1: Following a period of initial interaction, an individual will perceive another as more similar to himself.

Hypothesis 2: As interaction proceeds beyond an optimal point, the individual tends to perceive the other individual as less similar to himself.

SUBJECTS: Study 1: 52 college undergraduates. Study 2: 10 patients in a VA neuropsychiatric hospital.

PROCEDURE: Study 1: Interaction between two individuals of the same sex who were strangers was employed. Experimental and control groups each consisted of 13 pairs of subjects. After taking a modified multiple choice Rosenzweig Picture-Frustration Study, each subject predicted his partner's responses on this test. This was followed by 20-minute interaction for the experimental group and individual written tasks for the control group. Then a second prediction of the partner's responses on the P-F Study was filled out by each subject.

Study 2: Five volunteer, male hospital patients who met for two hour-long psychotherapy meetings each week, were given a six-variable rating scale five times; once the day before the first meeting, and once at the end of every week thereafter. A control group was made up of patients from the same ward who attended a typing class.

RESULTS: Results from both studies support hypothesis 1, i.e., a statistically significant increase in perception of similarity to oneself after initial interaction. Results from the second study support hypothesis 2, i.e., decreased similarity as interaction proceeds. Other results are discussed, including differential effects of Negro-white interaction and the variability with which oneself and others are perceived. Both studies are presented and discussed within the theoretical framework of "the psychology of personal constructs."

10:35 A.M. Stability of behavior and status in small leaderless groups. BEATRICE M. SHRIVER, *American Institute for Research*.

This is one of a series of studies on group behavior and leadership performed at the University of Rochester. This study was designed to determine whether behavior within small leaderless groups fluctuates or remains relatively stable as the group meets repeatedly to work upon parallel forms of the same tasks.

Subjects were twelve NROTC students formed into groups of four on a low acquaintanceship basis, no closely acquainted persons working in the same group.

Groups met for five two-hour sessions in which they performed three tasks: a reasoning task using syllogistic problems; a mechanical task involving assembly of precut lumber; and a group discussion of a social problem. Continual recording of Ss' behavior was done by two independent observers using a comprehensive system of 59 categories.

Six "indices" each composed of several categories were developed representing the following behavioral dimensions: (a) organizing behavior, (b) directive-suggestive behavior, (c) status-raising acts, (d) insightful behavior, (e) participant follower acts, and (f) goal-oriented work behavior. Analyses of variance of scores on these indices revealed no significant between-group variances; no significant between-sessions variances were found, except for insightful and status-raising acts. Changes in insightful behavior paralleled motivational changes reported by subjects in post-experimental interviews. Intercorrelations between indices revealed that the first four named above formed a cluster; these were used to represent the operational definition of leadership behavior. On the average, persons retained the same

rankings from session to session in terms of total amount of leadership behavior, suggesting that the status hierarchy established in the first meeting remained stable. These findings are supported by analysis of variance results on status-raising behavior, where a large drop in scores from the first to second session accounted for most of the variance among session scores. (Slides)

SOCIAL STRUCTURE AND INDIVIDUAL BEHAVIOR

11:00-12:00 M., Monday, South American Room, Statler

HENRY W. RIECKEN, Chairman

11:00 A.M. Changes in authoritarianism as related to situational factors. RICHARD CHRISTIE, *Research Center for Human Relations, New York University*.

PROBLEM: Research utilizing the concept of authoritarianism as defined in the California studies has been primarily concerned with the relationships between authoritarianism and other psychological variables. The present report deals with the relationship between involuntary membership in a military society and individual acceptance of authoritarian statements.

SUBJECTS: 182 white inductees in an Army basic training center.

PROCEDURE: A modified form of the California F (authoritarianism) scale was given in conjunction with interviews prior to and after completion of six weeks of infantry training.

RESULTS: There was a slight but insignificant increase in acceptance of F-scale items upon the second administration for the sample as a whole. However, one subgroup did shift significantly in acceptance of authoritarianism.

Sociometric data made it possible to determine the degree to which each individual was accepted or rejected by other recruits as well as by the noncommissioned training personnel. Four subgroupings were made in terms of acceptance or rejection by peers and superiors. Those recruits more accepted than rejected by both groups ($N=55$) were found to become significantly (.05 level) more authoritarian after six weeks of military life. Their F-scale scores were not different from those of the other subgroups upon the initial administration and none of the other subgroups shifted significantly.

CONCLUSIONS: The increase in authoritarianism by those recruits who "fit" into military life indicates the importance of situational as well as personality factors in the acceptance of authoritarian ideology.

Initial acceptance of authoritarianism was not related to subsequent shifts; the primary determinant appeared to be the degree to which the individual's behavior in a structured society was favorably viewed by peers and superiors. (Slides)

11:15 A.M. Subjective aspects of occupational status.

JOHN D. CAMPBELL, *Haverford College*.

PROBLEM: To study perceptions of occupational status; to examine the relationship of such perceptions to certain psychological and status characteristics of the viewers.

SUBJECTS: 250 residents of the Boston Metropolitan Area, men 21 to 60 years old.

PROCEDURE: Respondents (*a*) sorted randomly ordered cards naming 70 occupations into "groups of men who are pretty much alike, . . . lead about the same kind of a life"; (*b*) "placed" themselves and their fathers among groups thus sorted; and (*c*) ranked the groups. Each respondent's own picture of the occupational structure was the basis for further questions on perceived similarity and difficulty of mobility between strata.

A rating based on occupation, socioeconomic status, and education was the main index of respondents' status. Guttman scales of socioeconomic aspiration, expectation, and satisfaction were constructed.

RESULTS: Individuals generally agreed on rankings of occupations, but not on the number of occupational strata ("classes"). Their views of their own status and of their mobility were significantly associated with objective indices of status and mobility.

Respondents gave slightly higher rankings to jobs similar to their own and enhanced their own status in comparison with their fathers'. They viewed their own occupational stratum as more like the one above them than the one below, yet reported mobility up from their own as harder than from the stratum below. Those viewing mobility as difficult attributed difficulty to factors beyond their control.

Certain differences in status perceptions were associated with objective status differences. Socioeconomic aspirations, expectations, and satisfactions were not consistently linked with status perceptions. **CONCLUSIONS:** Status perceptions are a function both of the self as a reference point and of outer-structured realities. This inquiry indicates certain perceptions that are more stimulus bound, others more influenced by subjective factors. Findings are related to the study of social class and class solidarity patterns. (Slides)

11:30 A.M. . Personality characteristics and the resolution of role conflicts. ELLIOT G. MISHLER, *Princeton University*.

PROBLEM: To determine whether certain personality characteristics are associated with a tendency to resolve conflicts between obligations to a friend and the obligations of a social role in a Particularistic way (i.e., in favor of the friend) or in a Universalistic way (i.e., in favor of the social role). Analysis of a Universalistic social system (i.e., bureaucracy) suggested the general hypothesis that a Universalistic role orientation would be embedded in an "authoritarian" character structure. Seven characteristics defining this personality type were selected for study.

SUBJECTS: 50 Princeton undergraduates.

PROCEDURE: Personality data were secured through a specially constructed sentence completion test. The role conflict scale, developed by Stouffer, contained four hypothetical situations. Each required a choice between giving a friend "a break" when this involved the violation of another social obligation or taking the opposite action. The E and F scales were also administered.

RESULTS: Four personality types emerge from a correlational analysis. Particularistic role orientations are associated with either of two uncorrelated clusters of personality characteristics. They either (*a*) look upon the world as a "jungle," resent and suspect women, and are motivated by externally defined goals; or they (*b*) reject authority demands, regard deviant behavior permissively, objectively appraise their parents, and accept the expression of their own impulses. The two Universalistic types are characterized conversely and either (*a*) regard other persons benignly, respect women, and are motivated by internally defined goals; or they (*b*) submit to authority, condemn deviant behavior, idealize their parents, and restrict the expression of their own impulses. Ethnocentrism is positively associated with a Particularistic role orientation.

An item analysis of the F scale indicates that Particularistic persons agree with statements which reflect general cynicism; Universalistic persons agree with those which reflect a general submission to authority.

The initial hypothesis and the conception of the "authoritarian personality" are reformulated on the basis of the findings.

11:45 A.M. The latent structure of political decisions: An operational taxonomy of roles. HARRY A. GRACE, *University of Illinois*.

ASSUMPTIONS: Action on an issue is determined by the faction to which the individual belongs. The disposition of an issue may be determined by agreements made before final action is taken.

HYPOTHESIS: If factions or agreements have opera-

tional meaning, then they may be inferred from overt behavior.

PROBLEM: To find the best measure of overt behavior in order to determine blocs of policy makers which facilitate prediction of future decisions.

SUBJECTS: The 49 senators of the Sixty-fifth General Assembly of Illinois.

METHOD: Data were gathered on the ecology of each election district and on the senator's sociological and psychological affiliations. These data were dichotomized and the respective joint proportion matrices factored.

The formal roles played on legislation were correlated with quantitative measures of affiliation.

The proportions of times each senator voted with every other senator on the 240 split roll call votes were analyzed to determine the latent structure. The blocs revealed by this method were compared with regard to data mentioned in the above paragraphs and data regarding the legislation itself.

RESULTS: Clusters obtained by analyzing ecology, affiliations, and formal roles are of little value in vote prediction. They may be useful in testing other hypotheses.

The blocs determined from behavior on roll call votes predict policy formation as well as classify legislators. Comparisons of blocs enable us to understand the latent factions of agreement and indicate the minimal number of decision-makers whose behaviors are indicative of the chamber.

CONCLUSIONS: Latent agreements are ascertainable from overt behavior. An operational taxonomy of roles is necessary to predict operations. Role taxonomies on other levels, nominal or behavioral, may prove fruitful for research tangential to prediction. Information concerning a few policy makers is sufficient to understand and predict the actions of many.

LEADERSHIP AND LEADERSHIP TRAINING

1:40-2:40 P.M., Monday, South American Room, Statler

CARROLL L. SHARTLE, Chairman

1:40 P.M. The measurement of supervisory behavior, leadership attitudes, and group expectations. EDWIN A. FLEISHMAN, *Human Resources Research Center, Lackland AFB.*

PROBLEM: Recent research on leadership has emphasized that what is effective leadership in one situation may be ineffective in another. It therefore seems desirable to have available methods of describing aspects of the leadership-group situation which might have application from one situation to another. The

purpose of this study was to develop scales which might be used in industry by leaders and group members to describe objectively leadership attitudes and behavior, and group expectations of leaders in given situations. The study was conducted at the Personnel Research Board, Ohio State University, with the cooperation of the International Harvester Company. **SUBJECTS:** Pretest: 100 foremen. Test population: 60 general foremen, 122 foremen, and 394 workers.

PROCEDURE: Based on factor analyses of the items and other data obtained in the pilot study, a supervisory behavior description questionnaire, a leadership attitude questionnaire, and a group expectation questionnaire were constructed. Items were grouped into scales based on their loadings on each of the factors isolated. Parallel items were included on each of the three questionnaires in the study and the revised forms administered to individuals at different levels in the plant hierarchy.

RESULTS AND CONCLUSIONS: Two primary "leadership dimensions" were isolated. One dimension, called "Consideration," represented the extent to which the leader was considerate of the feelings of those under him. The other dimension, called "Initiating Structure," contained items reflecting the extent to which the leader restricted or facilitated interactions of group members toward goal attainment. Scores on each dimension in each questionnaire had substantial reliability and the two dimensions proved quite independent of each other at the behavioral and attitudinal levels. Leadership behavior, attitudes, and expectations found at various plant levels, and suggestive relationships with labor grievance rates will be discussed.

1:55 A.M. The relation between the crew's perception of the leadership behavior of airplane commanders and superiors' ratings of their combat performance. ANDREW W. HALPIN, *Ohio State University.*

PROBLEM: To study the relationship between the description of the airplane commander's leadership behavior as perceived by the members of his own crew, and the evaluation of his combat performance as rated by his superiors.

SUBJECTS: 33 commanders of B-29 crews.

PROCEDURE: During training in this country, the members of 33 crews described their commanders on a Leader Behavior Description Questionnaire. Later, in Japan, after the crews had had combat experience, 29 of these airplane commanders again were described by the members of their crews. Both sets of questionnaires were scored for two dimensions of leader behavior: Consideration and the Initiation of Structure. These commanders also were rated by their superiors

on seven criteria: (1) Technical competence upon arrival in the Far East Air Force, (2) Technical competence at the present time, (3) Effectiveness in working with other crew members, (4) Conformity to SOP, (5) Performance under Stress, (6) Attitude and Motivation to be effective, (7) Over-all effectiveness as a combat crew member. The relationships between the two dimension scores of leader behavior and these ratings were analyzed.

RESULTS AND CONCLUSIONS: The superiors tend to evaluate as effective those airplane commanders who score high on the Initiation of Structure dimension, but are inclined to associate Consideration toward crew members with ineffective leadership. The factor analysis of the two dimension scores indicates that they are independent but not antithetical. The superiors, however, apparently view the dimension relationship as antithetical rather than as merely independent.

2:10 A.M. Amenability to leadership training related to leadership status. BERNARD M. BASS and STANLEY KLUBECK, *Louisiana State University*. (Sponsor, Bernard M. Bass)

PROBLEM: To demonstrate that for a limited, specified, quasi-real situation: (a) leadership behavior can be changed significantly through brief training; (b) some persons will increase their leadership status significantly more than others following training; and (c) persons of higher leadership status, initially, are more likely to benefit from leadership training than those of lower initial leadership status.

SUBJECTS: 20 groups of 7 girls each, each group member representing one of seven sororities. ($N = 140$)

PROCEDURE: Each group was subjected to a leaderless group discussion. Then, the seven participants were treated differentially. The girls who ranked third and sixth in leadership status attained during the LGD were briefly coached while the remaining five girls were tested and interviewed about other matters. The group was retested on the LGD. Analyses of covariance were run testing the significance of changes in LGD score which occurred for the various experimental and control aggregates.

RESULTS: Training significantly increased the leadership behavior of girls fairly high in leadership status initially while it had a slightly negative effect on girls initially low in status.

CONCLUSIONS: (a) It can be deduced that briefly coaching LGD participants beforehand may increase the validity of the LGD as an assessment device by increasing the heterogeneity of LGD scores—a correlate of LGD validity. (b) Programs for improving leadership in organizations should include both *selection* and *training* procedures.

2:25 A.M. Effects of role playing upon (a) role flexibility and upon (b) ability to conceptualize a new role. JACK R. GIBB, *University of Colorado*.

PROBLEM: To test the hypothesis that training in role playing will increase both (a) the ability to conceptualize a new role, and (b) the ability to take the new role in a social situation.

SUBJECTS: 140 college students, assigned to five groups, matched as to size, age, sex, and college major.

PROCEDURE: The Ss were assigned to five groups of 28 each. Nine pre- and postexperimental measures were made on each subject. The groups were given differential treatment over a period of 16 weeks. Groups A, B, and C were given "participative-group" training for five hours each week in subgroups of 14. Group A, in addition, received (a) continual training in role playing and its uses, and (b) individual knowledge of all pretraining test scores. Group B received no role training but did receive all other training, including knowledge of results. Group C received neither role playing nor knowledge of results. Two groups, D and E, were given no training and differed only in that group D received knowledge of results.

RESULTS AND CONCLUSIONS: Ability to conceptualize a new role was measured by test-faking while assuming an assigned role. Role flexibility was measured by a newly standardized social-situation test. Statistically significant results indicated that role playing, independent of knowledge of results and other training procedures, contributed to both the conceptualization of new roles and the taking of new roles in social situations. The other groups were arrayed in the order predicted by the hypotheses tested. Results of the other tests are given and hypotheses advanced to account for the data obtained. Among other implications, the data indicate the feasibility of pre- and posttherapy measures of differential changes in role conceptualization and social role-taking.

THE AUTHORITARIAN PERSONALITY

2:50-3:50 P.M., Monday, Federal Room, Statler

DONALD T. CAMPBELL, Chairman

2:50 P.M. Dogmatism and opinionation on the left and on the right. MILTON ROKEACH, *Michigan State College*.

PROBLEM: (a) To formulate a theory regarding political-economic, religious, scientific, and philosophical dogmatism and on the basis of such a formulation to construct a scale for the measurement of dogmatic personality trends. (b) To relate the variable of dogmatic personality trends to other ideologi-

cal variables (opinionation, liberalism-conservatism, ethnocentrism) and to certain personality variables (authoritarian personality, anxiety, and rigidity). (c) To focus particular attention on the problem of dogmatism in those subscribing to left-of-center as well as those subscribing to right-of-center ideologies.

SUBJECTS AND PROCEDURES: On the basis of observations and study of dogmatic and opinionated persons two scales were constructed: (a) The Dogmatic Personality Scale, composed of statements regarding over-identification with a cause, time-perspective, punitiveness toward the ideological renegade, attitude toward martyrdom, refusal to compromise ideologically, identification with the intellectual elite, guilt, egocentrism, self-righteousness, etc. (b) The Opinionation Scale, composed of matched left- and right-opinionated statements (e.g., Only a simple-minded fool would believe that . . .) about America, Russia, China, labor, God, socialized medicine, fascism, loyalty oaths, race differences, MacArthur, Roosevelt, etc.

These two scales along with several others were administered to 202 Michigan State College students.

RESULTS AND CONCLUSIONS: Dogmatism correlates .67 with authoritarianism (F scale) but only .36 with ethnocentrism (E scale). *When ethnocentrism is held constant dogmatism correlates .61 with authoritarianism.* These findings, coupled with the finding that dogmatism correlates only .13 with liberalism-conservatism (P.E.C. Scale), suggest: (a) the partially-successful isolation and measurement of "the dogmatic personality" and (b) that dogmatism cuts across the left-right continuum. Furthermore, dogmatism correlates .51 with the Opinionation Scale which contains matched left- and right-opinionated statements. Dogmatism also correlates significantly with anxiety, rigidity, and other personality measures.

The theoretical significance of these results will be discussed.

3:05 P.M. Authoritarianism and the achievement motive. ROGER W. BROWN, *University of Michigan*. (Sponsor, E. Lowell Kelly)

We have reported that a significant correlation between problem-solving rigidity and authoritarianism appears only when the testing atmosphere is ego-involving. In a nonego-involving situation, on the other hand, the correlation is reduced nearly to zero. Why should this be so?

Three measures were used in the experiment—the California F scale (as an index of authoritarianism), the *Einstellung* arithmetic problems (as an index of the cognitive rigidity), and the projective measure of the achievement motive. The college freshmen who served as Ss were divided into groups designed to be ego-

involving and nonego-involving. Within the former group scores on achievement motivation were curvilinearly related to both *Einstellung* problem scores and F scores. A greater rigidity and a higher degree of authoritarianism were associated with a moderate amount of achievement motivation. Within the nonego-involved group moderate achievement motivation was associated, as in the other group, with high authoritarianism but not with rigidity. It is believed that the significant correlation between F scores and rigidity scores springs from the significant relationship between both of these variables and moderate achievement motivation. This relationship was present in the ego-involved group but not in the nonego-involved group.

It is possible that these curvilinear relationships will become linear with a few changes in the method of scoring the projective protocols obtained to measure achievement motivation. For the present, however, the explanation of our data must draw upon McClelland and Liberman's suggestion that moderate scores represent a range of high "anxiety over achievement." This anxiety, when situationally aroused, would cause subjects to rigidify in their problem solving. Drawing upon the theories of the achievement motive and of the authoritarian personality, an explanation is offered for the relationships between "achievement anxiety," authoritarianism, and rigidity.

3:20 P.M. Anomie, authoritarianism, and prejudice: a replication of Srole's study. ALAN H. ROBERTS, MILTON ROKEACH, and KEITH MCKITRICK, *Michigan State College*. (Sponsor, Milton Rokeach)

PROBLEM: This study is a replication of Leo Srole's study of the relationships existing among anomie, authoritarianism, and prejudice. Anomie is a sociologically-oriented concept which refers to "social dysfunction or disorganization, group alienation, (and) demoralization." Srole obtained measures of these variables in a sample of 401 respondents in Springfield, Massachusetts. He concluded after an analysis of the manner in which these three variables were interrelated that it was the variable of anomie which was primarily related to prejudice and that authoritarianism, as measured by the F Scale, "is no longer highly correlated with social distance attitudes toward minority out-groups, at least *not independently* of the psycho-sociological factors presumably measured by (the) Anomie Scale." In view of the theoretical importance of Srole's findings and conclusions, it was considered desirable to repeat his study.

SUBJECTS AND PROCEDURE: The same anomie and authoritarian items employed by Srole were administered to 86 adult residents of Lansing, Michigan.

Also given was the Ethnocentrism Scale. The Ss were chosen from randomly selected block samples and were interviewed in their homes.

RESULTS: Pearson r 's were computed among anomie, authoritarianism, prejudice, and education. In general, all four variables were highly intercorrelated. The r between prejudice and authoritarianism was .64; between prejudice and anomie, .55. When anomie and education were held constant, prejudice and authoritarianism correlated .48. However, when authoritarianism and education were held constant, the correlation between prejudice and anomie dropped to .28. **CONCLUSIONS:** The present data do not seem to support Srole's hypothesis that anomie bears a closer relationship to prejudice than does authoritarianism. Indeed, the present data suggest that authoritarianism bears a closer relationship to prejudice than does anomie. However, the small, but nevertheless significant, relationship between anomie and prejudice indicates that further research is merited.

3:35 P.M. The relation between authoritarian attitudes and dreams. SAMUEL J. MEER, *Western Reserve University*.

PROBLEM: To test certain aspects of the theory of *The Authoritarian Personality*.

PROCEDURE: This is part of a larger study of the relationship between ideology and dreams. The Ss were 71 male and female undergraduates who were divided into high (authoritarian) and low (nonauthoritarian) groups based on their scores on a 20-item F scale. A series of dreams was obtained from each S which was scored for several variables using a previously devised scoring manual.

Difference in ways of handling emotional ambivalence toward parents was tested. Authoritarian persons cannot accept this ambivalence, and solve the problem by setting up rigid dichotomies of in-group and out-group. They project and displace the negative aspects of their ambivalence onto out-groups, and overidealize the "virtues" of the in-group. Nonauthoritarian individuals can face their ambivalence more openly and therefore need not think of people in terms of in-group and out-group.

Four propositions were tested in accordance with the above hypothesis: Highs will have more aggression in dreams with characters classified as strangers (out-group) than with characters classified as family, friends, and acquaintances (FFA) (in-group). Highs will have more friendliness with FFA than with strangers. For lows there will be no difference in aggression and in friendliness with strangers and FFA.

RESULTS AND CONCLUSIONS: All four propositions were confirmed. Highs showed significant differences

in the expected direction, and lows showed differences in the same direction although not significant as predicted. The reasons for this are discussed. Comparison between highs and lows on aggression revealed differences which were significant. A similar comparison for friendliness revealed non-significant differences. The data lend support to the findings of Adorno *et al.* that authoritarian subjects tend to think in terms of dichotomies while nonauthoritarian subjects do not.

PROCESSES IN SMALL GROUPS II

4:00-5:00 P.M., Monday, Federal Room, Statler

ROBERT L. FRENCH, Chairman

4:00 P.M. The effects of decision-making on motivational processes in group members. MURRAY HORWITZ and FRANCIS J. LEE, *University of Illinois*.

PROBLEM: Lewin argues that before motivation can result in action it must be mediated by decision-making. A theory of the character of this mediation is presented here and a derivation is experimentally tested. If we assume:

1. decision-making corresponds to a change of the psychological situation from one of greater "fluidity" (fluctuation between alternatives) to one of lesser "fluidity" (fixing of an alternative);

2. in more fluid situations need-tensions tend to produce *restructuring* of the field (wish-fulfillment); in less fluid situations need-tensions tend to produce locomotion of the person (action); then,

3. in a situation of indecision recall of finished tasks (coordinated to wish-fulfillment) should be greater than recall of unfinished tasks; in a situation of decision, recall of unfinished tasks (coordinated to resuming the action) should be greater than recall of finished tasks.

SUBJECTS AND PROCEDURE: Five-member groups, representing eight sororities, worked as teams on fifteen jigsaw puzzles. Members voted independently on finishing each puzzle, the Ss' task being to cast a vote which would contribute to maximum group agreement. Announcements of the group vote were varied to make Ss believe they agreed and disagreed with the group about equally often. Data included (a) the S's report about whether he could decide how to vote on a given puzzle or was voting at random, (b) a list of puzzles recalled by each S, and (c) a questionnaire measuring interest in the experiment.

RESULTS: The predicted reversal in recall was obtained. For "decision" puzzles, the recall of disagreements significantly exceeded the recall of agreements; for "indecision" puzzles, the recall of agreements sig-

nificantly exceeded the recall of disagreements. Both these effects appeared significantly more strongly for high-interest subjects than for low-interest ones. Theoretical implications of these results for studying the interaction of personality and social processes are discussed. (Slides)

4:15 P.M. The evaluation of group versus individual decisions. JOEL DAVITZ, IRVING LORGE, KENNETH HERROLD, and DAVID FOX, *Teachers College, Columbia University*. (Sponsor, Irving Lorge)

PROBLEM: This research was designed to evaluate the differences between group and individual decisions.

SUBJECTS: 250 Air Force officers enrolled at the Air University, Staff and Command School.

PROCEDURE: The Ss were asked to write a concrete and comprehensive plan of action to raise the morale and operating efficiency of an isolated Air Force base. In order to compare individual and group decisions, individual-group and group-individual sequences were followed.

Half the Ss made a decision about the problem individually and then met in groups of six to write a group decision about the same problem. The remaining Ss initially met in groups of six to write a group decision and then wrote individual decisions about the same problem. The pregroup *individual* decisions, the postgroup *individual* decisions, as well as the two sets of group decisions, were compared in terms of the quality of the written decisions.

RESULTS: A content analysis of the decisions was made to specify each unduplicated point, and the quality of the decisions was estimated by a combination of the evaluated points. The pregroup *individual* decisions were superior to the preindividual *group* decisions, while there was no significant difference between the postgroup *individual* and the postindividual *group* decisions. The postindividual *group* decisions were superior to the preindividual *group* decisions, while there was no significant difference between the pre- and postgroup *individual* decisions. The data suggest that previous group experience, time, intelligence and prior commitment influence the differences between group and individual decisions.

This research was conducted under a contract with the Human Resources Research Institute of the Air University, Maxwell Field.

4:30 P.M. Social perception measures as predictors of effectiveness in basketball teams. FRED E. FIEDLER, WALTER HARTMANN, and STANLEY A. RUDIN, *University of Illinois*. (Sponsor, Fred E. Fiedler)

PROBLEM: This study tested the hypothesis that group

members' perceptions of one another correlate with effectiveness of team work.

SUBJECTS: Members of 14 high school basketball teams were tested at the beginning of the basketball season. After analysis of these data, a second group of 7 "good" and 5 "poor" teams was tested toward the end of the season to cross-validate the findings based on the first sample.

PROCEDURE: In addition to work-companion sociometrics ("With whom can you play best?" "With whom can you play least well?") S completed forced-choice questionnaires (a) describing themselves, (b) predicting responses of their preferred work-companion, and (c) predicting responses of their negative choice for work-companion.

Interpersonal perceptions were measured by correlating an S's self-description with his prediction of his preferred choice (XsXp), his self-description with his prediction of his negative choice (XsXn), finally, his predictions of preferred and negative choices were correlated (XpXn). Previous studies on interpersonal relationships suggested these to be important variables, related to warmth and liking.

The criterion of team effectiveness was measured in terms of the proportion of games won.

RESULTS: Correlations between the criterion and the team's median score on perception measures were not significant; rho's between perception measures of the team's most preferred work-companion and the criterion were .73, .78 (p for both $< .01$) and .26 for XsXp, XpXn, and XsXn, respectively, in the first sample. Point biserials were .58 ($p < .05$) for XpXn and .19 for XsXp in the cross validation sample. Deleting one unusual team containing three brothers, these correlations were .62 and .63 respectively.

CONCLUSIONS: 1. Interpersonal perception measures are promising predictors of group effectiveness.

2. More effective basketball teams confer status on task-centered persons, less effective teams confer status on warm, relationship oriented individuals.

4:45 P.M. The influence of subgroup relationships on the performance of group and subgroup tasks. T. B. ROBY, *Combat Crew Training Research Laboratory, Human Resources Research Center*. (Sponsor, Robert L. French)

PROBLEM: To relate sociometric measures within and between the subgroups comprising a bomber crew to the performance measures most immediately connected with those subgroups.

SUBJECTS: 90 eleven-man bomber crews in training at Randolph Air Force Base, Texas.

PROCEDURE AND RESULTS: Sociometric rating and ranks were correlated with various performance measures indicating the effectiveness of subgroup perform-

ance. The results indicate that, on an over-all basis, a high degree of personal liking is associated with superior performance of the crew as a whole. On the other hand, when attention is concentrated on certain specific task divisions within the crew, the correlations between performance scores and the sociometric ratings between crew positions most immediately concerned are chiefly negative. Further analysis shows that there may be optimal ratios relating within-subgroup to between-subgroup mean sociometric values, which optima are determined by the amount of subgroup interaction. Evidence has been obtained from successive sociometric measures within groups which indicates that while sociometric ratings may be influenced by the performances under consideration, the predominant direction of causality is probably in the reverse direction.

CONCLUSIONS: The somewhat conflicting results cited are interpreted as supporting an essentially ecological conception of social behaviors, where the survival value of a given response is jointly determined by response competition and environmental factors. Within this framework, sociometric ratings may be understood as indicating the motivational weights to be assigned where competition exists. (Slides)

SYMPOSIUM: SOCIALIZATION IN CROSS-CULTURAL PERSPECTIVE

4:00-6:00 P.M., Monday, Presidential Room, Statler

(Co-sponsored with Divisions 7 and 9.)

M. BREWSTER SMITH, Chairman

Participants: ROBERT R. SEARS and
JOHN W. M. WHITING.

PROCESSES IN SMALL GROUPS III

9:50-10:50 A.M., Tuesday, Federal Room, Statler

ARTHUR F. JENNESS, Chairman

9:50 A.M. An investigation of relationships between motivation and interaction behavior in small groups. ROY E. BUEHLER, *University of Wisconsin.*

Some current assumptions regarding motivation in small group interaction were investigated. It was hypothesized that (a) specific motivational states are associated with specific behavior in small groups and (b) that motivational states may be altered by participation in psychotherapy oriented small group interaction. Ss were 49 graduate and undergraduate students, including 26 experimentals and 23 controls. Inferences regarding motivational states were derived from TAT test and retest protocols, quantified by

Aron's scoring method. Behavioral tendencies in small groups were derived from observational data obtained by Bales' interaction process analysis method. The experimental situation consisted of nine hours of guided group interaction in small groups of 9 Ss each. Associations between motivation and behavior were tested by 2×2 chi square, and changes in motivation were tested by *t* tests of differences between means.

Results indicate that Ss scoring high on need aggression outward tend to behave the opposite in small groups, scoring low on aggressive acts. High scores on intrapunitive aggression are associated with low frequencies of socially aggressive acts, and vice versa. Tendencies toward association appear, although at *p* values greater than .05, between need superiority (status strivings) and nonconstructive behavior in small groups and between need manipulation and aggressive acts in small groups. One of the nine TAT need-press categories showed change approaching significance ($p > .05$) after participation in nine group therapy sessions. This change, that is, reduction in scores on environmental press, indicates that Ss feel less threatened by their environments, more social psychologically secure after participation in therapy oriented small group interaction. Thus, the results are inconclusive in reference to the hypotheses, and are more provocative of further research than for present theory construction. Implications regarding the use of small group observation methods in personality research appear to be justified by the experimental procedure and resulting data.

10:05 A.M. Informal norms and willingness to fly in combat crews. LEONARD BERKOWITZ, *Combat Crew Training Research Laboratory, Human Resources Research Center.*

PROBLEM: To examine the relationship between degree and direction of attitude consensus in bomber crews, and the frequency of missions "aborted" (not completed) in training. It was assumed that frequency of "aborts" reflects in part a crew's willingness to fly, that the latter is influenced by informal crew norms, and that consensus of scores on a relevant attitude scale measures the extent to which a norm is developed.

SUBJECTS: 52 eleven-man bomber crews in training at Randolph Field.

PROCEDURE: Early in combat crew training the subjects were given an attitude scale designed to measure "Confidence in Air Force Management." A high crew mean and high agreement among crew members on this scale was assumed to indicate a group norm favorable to the Air Force, while a low mean and high agreement among the crew members was taken

as indicating a norm unfavorable to the Air Force. These measures were related to the number of "aborted" missions later in training.

RESULTS: Dichotomization of the two distributions, crew means and crew agreement, yielded a 4-fold table, within which frequency of "aborted" missions declined in this order: (a) high mean—high agreement, (b) high mean—low agreement, (c) low mean—low agreement, (d) low mean—high agreement. Interaction of the two variables was significant at the 2% level of confidence, thereby tending to confirm the original hypothesis. These results, together with those of some further analyses, will be discussed with reference to concepts of group norms and group productivity. (Slides)

10:20 A.M. Group discussion, decision, public commitment, and perceived unanimity as factors in the effectiveness of "group decision." EDITH BECKER BENNETT, *University of Michigan*.

PROBLEM: To determine the relative contribution of each of the variables applied concurrently by Lewin and his co-workers in their "group decision" experiments, and found together to be effective in changing a population's action; by controlling some, and varying others independently.

POPULATION: 473 students of an introductory course in psychology, assigned to 36 experimental groups ($N = 8-17$) equated for members' attitudes toward serving as Ss in psychological experiments.

PROCEDURE: Twelve groups carried on *group discussions* about their reactions to a request to volunteer as experimental Ss, 12 were given *lectures* whose content was equated with the subject matter raised by the discussion groups, and 12 *control groups* were exposed to no influence attempt. These three treatments were further subdivided into four categories of 3 groups each and decision requests regarding willingness to volunteer when needed were introduced, varying in the degree to which individuals' decisions seemed to be identifiable: (a) no decision, (b) anonymous decision, (c) partially anonymous decision and (d) public identification of decision.

The proportion of positive decisions was allowed to vary freely. Leadership personnel was equated; three male graduate students led one each of the three groups exposed to each experimental treatment.

An "action criterion" was defined by individuals' responses to mailed requests for volunteers for a "central file" of Ss.

RESULTS: The factors of decision and perceived group unanimity of such decision were found to be significantly related to the carrying out of the specified action. Group discussion, other things equal, was not more effective than lecture, nor did public identifica-

tion of individuals' decisions contribute appreciably to obtained differences.

10:35 A.M. The effect of group discussion upon the privately expressed opinions of group members.

GLEN F. STICE, *Combat Crew Training Research Laboratory, Human Resources Research Center*.

PROBLEM: To determine the kinds of influence which the group decision reaching process has upon privately expressed opinions of group members.

SUBJECTS: 350 American males, comprising the total membership of 35 experimental social groups.

PROCEDURE: During the second, fifth, and seventh hours of each group's existence it was presented with a set of attitude statements. Each statement was discussed for four minutes, following which a public vote was held. Voting was on a seven-point scale and the mean of votes was taken as the group decision (with regard to the truth of the statement discussed). Before and following the discussion and decision, individual opinions were obtained on these statements, using an identical scale. Nine statements were discussed by each group, and 3,017 individual pairs of responses were obtained. These responses were classified into six sets, according to the amount the original expression differed from the group decision, and an "amount of shift" score was computed for each pair of responses.

RESULTS: When the original responses coincided with the group decision, 79.2% of postdiscussion responses were changed less than one unit. When the original response deviated from the group position the distribution of "amount of shift" scores became bimodal, with modes at points corresponding to no change, and to a change which would bring the opinion into agreement with the decision. Thus, when the original position differed by 4.45 units from the group decision, 46.5% of all shifts were of 4 ± 1 unit size, while 42.3% were of less than one unit size.

Correlation of odd-even "size of shift" scores, corrected for extent of original deviation, for individual subjects gave a reliability of + 0.02.

This work was done at the University of Illinois as a part of a contract with the Office of Naval Research.

LUNCHEON, EXECUTIVE COMMITTEE

12:15 P.M., Tuesday, Room 237/8, Mayflower

PERSONALITY DYNAMICS I

1:40-2:40 P.M., Tuesday, Presidential Room, Statler

THELMA G. ALPER, Chairman

1:40 P.M. The generalization of expectations. RICHARD JESSOR, *University of Colorado*.

PROBLEM: How does success or failure in one task affect the expectation of achievement in other tasks? Within the framework of Rotter's social learning theory, it is predicted that the degree of generalization will be a function of the need-relatedness of the subsequent tasks to the original task.

SUBJECTS: 125 male volunteers from introductory classes in English, speech, and psychology at Ohio State University.

PROCEDURE: The level of aspiration paradigm was utilized. Four tasks considered differentially need-related were selected. Need relatedness was further controlled by verbal descriptions of the "meaning" of success or failure on each task. Tasks included an arithmetic, anagrams, pursuit-rotor, and social attractiveness test. It was felt that the arithmetic and anagrams tasks involved need for academic recognition; the pursuit-rotor, need for physical or athletic recognition; and the social task, need for affection from the opposite sex. After hearing a description of the tasks, Ss gave, for each task, an expectancy statement (score they actually expected to get), and a minimal goal statement (lowest score they would be satisfied with). All Ss then performed the arithmetic test, received predetermined scores, and then made new expectancy and minimal goal statements for all tasks. It was predicted that success or failure on the arithmetic task would generalize most strongly to the anagrams, pursuit-rotor, and social task in that order.

RESULTS: In terms of number of Ss changing their expectancy and/or minimal goal statements, the results are as predicted. The differences between the tasks are significant for both kinds of statements. Also, for all tasks, the "gradient" of change of minimal goal statements is significantly lower than for expectancy statements. Need-relatedness constitutes one important dimension for predicting generalization effects. Research is projected to increase the reliability of need characterizations of task situations.

1:55 P.M. Ego strength and the recall of completed versus incompleting tasks. CHARLES W. ERIKSEN, *Johns Hopkins University.*

Alper has presented evidence that individuals who are characterized as having strong egos tend to remember a larger proportion of completed than incompleting tasks when the tasks are administered under ego involving conditions. The present study investigated the relation of ego strength to completed versus incompleting task recall. A measure of ego strength was derived from Beck's concept of $F+$ and $F-$ responses on the Rorschach.

The Ss were male undergraduate students at the Johns Hopkins University. A control group of 23 Ss

were given 16 scrambled sentences, half of them solvable and half unsolvable, under task oriented conditions. The 45 Ss in the experimental group were given the sentences under the guise of an intelligence test. A measure of reality contact (ego strength) was administered to all Ss. This measure was constructed from Beck's tables. The plus and minus responses were matched for scoring categories and were distributed among the ten Rorschach cards. Administration of this test consisted of pointing out the location in the Rorschach ink blots of each of these responses and asking S whether or not he could see the particular response. An S's score was based upon the number of $F+$ responses he rejected and the number of $F-$ responses he accepted.

Both groups recalled the same number of completed sentences but the experimental group recalled significantly fewer incompleting sentences. For the experimental group a significant correlation of .53 was obtained between ego strength, as measured, and the tendency to recall more completed than incompleting tasks. The corresponding correlation for the controls was negative but not significant. These results lend support to Alper's hypothesis. (Slides)

2:10 P.M. The effects of stress on rigidity of mental set in problem solution. ROBERT A. HARRIS, *Michael Reese Hospital.*

PROBLEM: To test the hypothesis that individuals under emotional stress will persist more rigidly in a mental set in the solving of problems than will individuals operating under relatively nonstress conditions.

SUBJECTS: 50 college students assigned at random to an experimental (stress) or control (nonstress) group.

PROCEDURE: All Ss (tested individually) had to solve a series of arithmetic problems involving the manipulation of different sized containers to get a specific quantity of water. The first four problems, designed to establish a set, could be solved by a relatively complex method involving subtraction. A fifth problem, solvable by either the complex or a simpler subtraction method, was used as a criterion of whether the set was established. The sixth, or test, problem could no longer be solved by the set method, but could be solved only by a relatively simple addition procedure. The time it took the subject to solve each of the problems was recorded.

The experimental Ss had to solve all the problems under the following conditions employed to create the experience of emotional stress: (a) abusive and critical behavior by the experimenter; (b) creation of a "test" atmosphere; (c) the experience of failure in

this test situation; and (d) false interpretation of a "personality questionnaire" to reflect in a detrimental way on the subject's personality. For the control Ss the experience of stress was reduced to a minimum. Interviews with each S revealed that those in the experimental group were working under considerably more emotional stress than were the control subjects. RESULTS: Approximately the same proportion of Ss in the stress and nonstress groups solved the criterion problem by the set method. Of the Ss who had established the set, those working under emotional stress took significantly longer to shift to addition and solve the test problem. This difference was significant at the .01 level. On no other problem was there a significant difference between the groups in the time taken for solution. A test of arithmetic ability revealed no difference between the two groups and no significant relationship between arithmetic ability and the speed taken to solve the test problem.

CONCLUSION: The hypothesis that stress may act to cause individuals to persist more rigidly in a mental set in the solving of problems was accepted.

2:25 P.M. A repetition of Williams' experiment on stress and associated Rorschach factors. VIRGIL R. CARLSON and RICHARD S. LAZARUS, *Johns Hopkins University*. (Sponsor, Richard S. Lazarus)

Among efforts to predict performance under stress, the results of Meyer Williams' experiment (1947, *J. consult. Psychol.*) stand out as the only instance of marked success. Correlating two Rorschach variables ($F +$ per cent and $Sum C/Total C$) with performance under stress on the Digit-Symbol test, Williams found a multiple R of .824 and single-order r 's of $-.724$ and $+.354$ for each variable, respectively. Because of repeatedly negative results in related experiments, and the fact that such a positive finding has considerable importance for the problems of psychological stress and personality measurement, Williams' study stands in serious need of repetition.

The exact procedures of Williams' experiment were duplicated with the same number of subjects (25). A first session included the administration of an individual Rorschach and a series of five practice trials with the Digit-Symbol test. The second session, a day or two later, included three practice trials on the Digit-Symbol test, three test trials under control conditions, and three test trials under stress conditions. The stress was induced by failure information, electric shock, and the presence of several observers. The stress score was the difference between performance under control and stress conditions.

The results of this study are in direct opposition to the findings of Williams. No correlation was signifi-

cant. The largest correlation, between stress score and $Sum C/Total C$, was .373 ($p = .08$), and was opposite in direction to that found by Williams. The (shrunk) multiple R between stress score and the two Rorschach variables was .345, clearly insignificant.

This research is a portion of the work performed under contract with the Perceptual and Motor Skills Laboratory of the Human Resources Research Center, Lackland Air Force Base. (Slides)

PERSONALITY DYNAMICS II

2:50-3:50 P.M., Tuesday, Presidential Room, Statler

REX M. COLLIER, Chairman

2:50 P.M. A projective study of psychoanalytic mechanisms of defense. STANLEY GOLDSTEIN, *VA Regional Office, St. Louis, Missouri*.

PROBLEM: To study some characteristics of the preferences of normal subjects for selected psychoanalytic defense mechanisms (repression, regression, reaction formation, projection). The following topics were investigated:

1. The empirical question, "Do normal subjects have consistent, stable defense preferences?"

2. The hypothesis that consistency of preference is positively associated with degree of conflict aroused by different impulses.

3. The theoretical deduction that reaction formation is an extension of repression.

SUBJECTS: 41 male and 63 female volunteer college students.

PROCEDURE: Blum's Blacky Pictures, a projective technique designed to tap major psychoanalytic dimensions, was modified to include the following components: spontaneous stories to eight of the original eleven cartoons; and a defense preference inquiry (DPI) developed by the experimenter. The DPI consisted of a set of statements for each cartoon corresponding to the four defense mechanisms. These were ranked on the basis of how well they agreed with the Ss' spontaneous interpretations of the cartoon. One month after the first administrations, thirty-eight Ss were retested.

RESULTS: 1. The group as a whole did not exhibit consistent defense preferences, although a significantly large minority did. The choices of both inconsistent and consistent subjects proved to be stable on the retest.

2. Greater consistency of preference in more conflicted areas was not confirmed.

3. The predicted relationship between reaction formation and repression was substantiated.

CONCLUSIONS: The data support the postulation of

two types of defenders within the normal group: a larger subgroup of "specific defenders" who prefer different defenses for different impulses; and a smaller group of "general defenders" who tend to employ the same defenses for all impulses. An analysis of the incidence of conflict in the spontaneous stories of the two subgroups supported the inference that "general defenders" are more emotionally disturbed than "specific defenders."

Interrelationships of preferences among the mechanisms support psychoanalytic theories concerning basic properties of these defense mechanisms.

3:05 P.M. The relationship between covert and overt levels of attitude and personality organization as revealed by the method of paired projective and direct questionnaires. JACOB W. GETZELS, *University of Chicago*.

PROBLEM: The levels of behavior represented by an S's reactions are psychologically crucial. These levels have variously been conceptualized as "private-public," "real-expressed," "covert-overt." Although these are not necessarily dichotomies, differences and similarities between responses determined relatively by "inner needs" and by "situational demands" cannot be neglected without exposing personality and attitude data to serious misinterpretation. The present research is concerned with providing a method for eliciting covert and overt levels of reaction to given objects of inquiry and with examining the relationships and discrepancies between these levels.

PROCEDURE AND SUBJECTS: Parallel projective and direct instruments containing socially conflicted and socially neutral objects of inquiry were constructed. The projective instrument, an adaptation of the sentence completion, was given as a verbal speed test, the respondent being unaware that his responses would be evaluated as attitudes. The direct instrument, a self-report inventory, was given as a straightforward questionnaire, the respondent being aware that his responses would be evaluated as attitudes. A total of 318 males and females, including clinically-selected maladjusted and adjusted groups, leaders and non-leaders, etc., were the Ss. Responses were analyzed for similarities and reversals between instruments, and for the distribution of discrepancies for different objects of inquiry and for various groups of subjects.

RESULTS AND CONCLUSIONS: (a) Discrepancies between covert and overt levels of reaction were maximal for socially conflicted objects of inquiry, minimal for socially neutral objects. (b) Discrepancies between covert and overt levels of reaction were maximal for the maladjusted, minimal for the adjusted group. (c) "Distortion" of responses from the covert to the overt level tended to conform to situational

requirements. (d) Distributions of responses at the overt level approached a J-curve; at the covert level, a normal curve. The results were interpreted as favoring concepts of "levels" in personality-attitude theory and as evidence for the usefulness of the "method of paired questionnaires."

3:20 P.M. Two levels of unconscious awareness. CHESTER D. CLAPP, *Merrill-Palmer School*. (Sponsor, Gerald S. Blum)

PROBLEM: To study experimentally an attempted integration of the perceptual concepts of vigilance and defense with the psychoanalytic notions of repressed strivings and ego function.

PROCEDURE: The experimental Ss were first administered the standard group Blacky Pictures, whereas the controls were given a modified preliminary experience. Two pairs, each containing a relatively traumatic and a relatively neutral stimulus picture, were then selected, along with one control pair consisting of two equally neutral pictures. In a series of tachistoscopic exposures all Ss were required to judge which one of the pictures in each pair seemed the "clearer" or closer to looking like something. The two levels of awareness were tapped by using two separate ranges for the exposure times—faster speeds for levels farther from consciousness, and slower speeds for nearer levels. The prediction was made that a shift in judgment of clarity would occur, from traumatic seen as clearer at the more unconscious level to neutral as clearer at the nearer level. Absence of this shift was predicted for the control pair.

RESULTS: The data of the experimental group were in statistically significant agreement with the predictions. Analysis of the control data generally supported, with some exceptions, the positive interpretation of the experimental results.

CONCLUSIONS: Experimental support for the concepts of perceptual defense and selective vigilance was inferred from the data. In addition, those parts of psychoanalytic theory which served as a framework for the design were interpreted as being upheld by the study with further credence given to the feasibility of studying this theory by experimental methods.

3:35 P.M. The significance of typical anxiety dreams. CALVIN S. HALL, *Western Reserve University*.

This investigation was undertaken to test the hypothesis formulated by I. Harris which states that people who have falling dreams predominantly are able to express aggression more openly toward the father than toward the mother in waking life because they are afraid of losing the mother's love, whereas people who have dreams of being chased and attacked

predominantly are able to express aggression more openly toward the mother than toward the father because they are afraid of antagonizing the castrating father. This hypothesis is based upon the familiar interpretation that falling dreams mean fear of loss of love, and dreams of being chased and attacked signify fear of castration. The data were obtained by means of questionnaires given to 509 Ss and by examination of a large number of falling and attack dreams. Harris's hypothesis was verified for men but not for women.

However, an examination of a large number of typical anxiety dreams, such as being chased, and a consideration of the antecedents to and the consequences of being chased, the nature and intention of the chasing agent, symbolic representations, and the reactions of the dreamer to being chased suggest other meanings in addition to that of fear of castration. Some of these other meanings are a self-conception of weakness in a world of hostile phallic males, fear of rape, fear of inner impulses, fear of anal aggression, and anxiety arising out of the oedipus complex. Sex differences which have interesting psychological implications are found. Male dreamers are chased following a misdeed, are saved by another person, and defend themselves by counterattacking the chaser more often than female dreamers.

PRESIDENTIAL ADDRESS AND BUSINESS MEETING

8:00 P.M., Tuesday, Williamsburg Room, Mayflower

DONALD W. MACKINNON. Fact and Fancy in Personality Research.

SYMPOSIUM: SOCIAL PERCEPTION

8:40-10:40 A.M., Wednesday, Ballroom, Mayflower

THEODORE M. NEWCOMB, Chairman

Participants: ROSALIND DYMOND, FRED E. FIEDLER, N. L. GAGE, WILLIAM F. SOSKIN.

SYMPOSIUM: THE MEASUREMENT OF HUMAN MOTIVES

1:40-3:40 P.M., Wednesday, Presidential Room, Statler

DAVID C. MCCLELLAND, Chairman

Participants:

GERALD S. BLUM. Measuring psychosexual motivation.

DAVID C. MCCLELLAND. Measuring achievement motivation.

GEORGE S. KLEIN. Measuring the regulation of motives.

SYMPOSIUM: DETERMINANTS OF ROLE RELATIONS: A STUDY OF THE RELATIONS AMONG CLINICAL PSYCHOLOGISTS, PSYCHIATRISTS, AND PSYCHIATRIC SOCIAL WORKERS

9:50-11:50 A.M., Thursday, Presidential Room, Statler

ALVIN ZANDER, Chairman

Participants:

BERNARD HYMOVITCH. A theory of relations among roles.

ALVIN ZANDER and JACOB HURWITZ. Hierarchy and competition as determinants of role relations.

ARTHUR COHEN and EZRA STOTLAND. Functional differences and nature of contacts as determinants of role relations.

Discussants: FREDERICK WYATT, DORWIN P. CARTWRIGHT.

SYMPOSIUM: ACCULTURATION AND PERSONALITY: AN INTERDISCIPLINARY APPROACH TO THE STUDY OF TWO GENERATIONS OF JAPANESE-AMERICANS

1:40-3:40 P.M., Thursday, Presidential Room, Statler

GEORGE DEVOS, Chairman

Participants:

SETSUKO M. NISHI. Compatibility of American middle-class orientation with traditional Japanese values.

WILLIAM CAUDILL. Japanese-American attitudes toward success as reflected in the Thematic Apperception Test.

GEORGE DEVOS. Acculturation in personality structure: A comparison of two groups of Japanese-American and American Rorschach records in respect to striving and ambition.

CHARLOTTE G. BABCOCK. The relationship of values to personal conflict as revealed in the psychoanalytic therapy of Japanese-Americans.

Discussant: CORA DUBOIS.

PERSONALITY AND THE COGNITIVE PROCESSES I

8:40-9:40 A.M., Friday, Williamsburg Room, Mayflower

EPHRAIM ROSEN, Chairman

8:40 A.M. A comparison of the auditory perception of emotional words for two groups of patients and a normal group. SHABSE H. KURLAND, *Columbia University and Washington VA Hospital.*

PROBLEM: Many studies have reported a change in recognition thresholds of words as a function of the "emotionality" associated with the words. For some Ss the change has been an increase in recognition thresholds, while for others the effect has been a lowering of the threshold. In this investigation it was proposed that the change in thresholds is related to the type of mechanism characteristically employed by the S to cope with anxiety. It was hypothesized that patients using obsessive-compulsive mechanisms would recognize emotional words at lower thresholds than patients using hysterical mechanisms.

SUBJECTS: 22 hospitalized patients using obsessive-compulsive mechanisms, 15 patients using hysterical mechanisms, and 21 normals.

PROCEDURE: Neutral and emotional words were recorded on a magnetic tape with increasing degrees of loudness so that the recognition thresholds could be obtained using an ascending method of limits.

RESULTS: There was no difference in the perceptual recognition thresholds for the two groups of patients. The combined patient group perceived the emotional words at significantly lower thresholds than the normal group.

CONCLUSIONS: In this study there was no demonstrable relationship between type of mechanisms used to handle anxiety and the perceptual recognition thresholds for the emotional words.

8:55 A.M. Personality correlates of perceptual selectivity following failure. DONALD ROBERT BROWN and R. JAMES YANDELL, *Bryn Mawr College and University of California.* (Sponsor, Donald R. Brown)

The hypothesis tested was that the better adjusted a subject was, as measured by a number of procedures administered during an intensive assessment program, the less wish-fulfilling perceptual selectivity and the more wish-denying perceptual behavior he would show after a failure experience.

Thirty-nine male PhD candidates were Ss during a three-day personality assessment program.

The Ss were run individually on a level of aspiration procedure to induce failure. A span of apprehension test was used on which Ss were made to fall below their stated goals on 13 out of 15 trials. Evidence of failure experience was shown by the declining aspiration level and the attempting of more responses with a larger percentage of errors by the experimental group than found in two other groups described elsewhere.

Immediately following the failure, twelve motivationally relevant words—4 "deprivation" words, 4 "goal" words, and 4 "instrumental" words—each matched for frequency by the Thorndike count with twelve neutral words were presented tachistoscopically. Each word was exposed repeatedly at .01 of a second with increasing illumination until recognition.

The threshold for each class of motivationally relevant words was determined by taking the number of trials necessary for their recognition from the number necessary for their matched neutral words. The degree of insensitivity to success words was found to correlate at the .01 level with independent staff ratings on soundness as a person, positive character integration, and adjustment. At the .05 level insensitivity to success words correlated with staff ratings of professional promise, social relations, flexibility, and leadership, and the Gough Adjective Favorability, Dominance, and Responsibility Scales. Combining sensitivity to deprivation and success words, multiple R's were obtained at the .01 level for staff ratings of professional promise, originality, and soundness. Self and staff check analyses of the Gough Adjective Check List and an analysis of the IPAR Item Scale also confirm the hypothesis.

9:10 A.M. A further study of the "threat-expectancy" variable in perception. EMORY L. COWEN and ERNST G. BEIER, *University of Rochester and Syracuse University.*

PROBLEM: The research finding (McGinnies) that threat words are perceived less rapidly than neutral ones has been criticized primarily on two grounds: (a) possible inhibited report of threat words, (b) lower word frequency of threat words.

The present study seeks to duplicate McGinnies findings, while checking the possible operation of the above factors.

SUBJECTS: 59 male and female undergraduates in an advanced psychology course.

PROCEDURES: The Ss were individually tested by one of three examiners (two male and one female). The E first read a list of 65 words informing S that he would be asked to decipher some of these words later. The Ss were then shown a series of booklets consisting of 30 copies of a single five-letter word. Copies were made on an electric typewriter and arranged in order from the most blurred to the clearest. Each S was given eight threat and eight neutral words to decipher. The E recorded time and trials required for correct report of each word.

RESULTS: 1. Significantly more trials were required for accurate report of threat words as compared to neutral ones ($p > .001$).

2. With respect to inhibited report of threat words:
 (a) No significant differences in report of threat words were found between: (1) male and female Ss, (2) male S and female E plus female S and male E vs. male S and male E plus female S and female E.
 (b) Posttest inquiry showed very few instances of inhibition in this relatively sophisticated sample.

3. Concerning word familiarity, a correlation of +.003 was found between mean number of trials for correct report and Lorge word frequency (— .08 with log word frequency).

CONCLUSIONS: 1. Notwithstanding advance warning, threat words are seen significantly later than neutral ones.

2. These results reflect the operation of a perceptual defense process (i.e., McCleary and Lazarus' subception) rather than inhibition of report or differential word familiarity.

9:25 A.M. Perceptual thresholds as a function of reinforcement and frequency. MARILYN K. RIGBY and W. K. RIGBY, *St. Louis University and Jefferson Barracks, Mo. VA Hospital.*

PROBLEM: To investigate the operation of positive and negative reinforcement and of frequency on tachistoscopic thresholds and to determine whether reinforcement has an effect beyond that of frequency alone.

SUBJECTS: Sixty 8½- to 9½-year-old school children with normal or corrected to normal vision and intelligence quotients between 90 and 115.

PROCEDURE: The Ss were divided into two 30-member groups to permit an independent replication of the study. Within each study Ss were divided into five subgroups on the basis of pretraining tachistoscopic thresholds. The six members of each subgroup received differential treatment in a latin square design. Five of these were experimental Ss who played a game involving association of different amounts of reinforcement with each letter in a group of five different letters. The game consisted of tossing a block with a different letter of the group, H, F, R, M, X, pasted on each of four sides and two blank sides. Thus, one letter of this group of five was absent for each subject. Values of 5, 2, 0, and — 3 were assigned in a counterbalanced order to the letters present on the block. Over the entire group each letter was assigned each value an equal number of times, and was absent an equal number of times. The Ss won and lost points and candy according to the value assigned to the letter appearing on top of the block after each toss. The control subject in each subgroup spent an equal amount of time playing a similar game. Every subject's tachistoscopic threshold was then measured for all letters.

RESULTS AND CONCLUSIONS: 1. Results support, at a

statistically significant level, the hypothesis that perceptual thresholds are an inverse function of amount of positive reinforcement.

2. The effects of positive reinforcement were significantly greater than the effects of frequency alone.

3. The effects of negative reinforcement were not demonstrably different from those of frequency.

SYMPOSIUM: INTERRELATIONS BETWEEN PSYCHOANALYTIC AND SOCIOLOGICAL THEORY: THE PROBLEM OF AUTHORITY FORCES INTERNAL TO AND EXTERNAL TO THE INDIVIDUAL

9:50–11:50 A.M., Friday, Ballroom, Mayflower

(Co-sponsored with Division 9. See Division 9's program.)

PERSONALITY AND THE COGNITIVE PROCESSES II

2:50–3:50 P.M., Friday, Williamsburg Room, Mayflower

CHARLES E. OSGOOD, Chairman

2:50 P.M. Cognitive style and regulation of need. GEORGE S. KLEIN and ANN SALOMON, *The Menninger Foundation and Harvard University.*

PROBLEM: In most need-cognition studies need appears as a disruptive and error-inducing irrelevancy. Will the effects of need in such circumstances depend on a person's control pattern for dealing with potential interferences? The present study is one of a series presenting evidence of two distinct styles of cognitive regulation which qualify behavioral influence of a need. It concerns cognitive behavior under thirst and nonthirst conditions of people representing contrasting response tendencies in the presence of task-irrelevant stimuli.

SUBJECTS AND PROCEDURES: 20 subjects showing low (LI) and 20 showing high (HI) interference in reading colors in a context of incongruent color names were chosen. Half of each group was made thirsty by a dry meal.

Properties of the two control patterns were hypothesized from a pilot study, and were represented by seven test situations all involving thirst-related and "neutral" symbols calculated to disrupt performance. Results will be presented for one of these: size-estimations of discs with superimposed symbols in a "perceptual" condition (standard and comparison field present) and in a "memory" condition (only comparison field present).

RESULTS: Effects were evaluated by analysis of variance and "sign analysis."

"Perceptual" condition: (a) *HIs* consistently *underestimated*, *LIs* consistently *overestimated* under both nonthirst and thirst conditions. Total error for the thirst condition of the two groups *combined* approached zero. Intra-individual directional tendencies were highly reliable. (b) In *LIs* the effect of thirst was nonpreferential as regards type of stimulus while *HIs* particularly underestimated thirst stimuli.

"Memory" condition: (a) All groups overestimated; *LIs* did so significantly more. (b) Thirst enhanced overestimation of thirst stimuli in *LIs* and reduced it in *HIs*.

CONCLUSIONS: Change in cognitive behavior is not a simple function of presence or absence of need, but depends in part on styles of regulation which organize the stimulus field and affect both quality and intensity of need. (Slides)

3:05 P.M. Cognitive controls in temporal behavior patterns. GUDMUND J. W. SMITH, *University of Lund, Sweden*. (Sponsor, George S. Klein)

PROBLEM: If temporal consistencies in behavior reflect generalized controls, they should permit prediction of modes of cognitive regulation in a variety of situations. Three adaptive patterns were derived from a task (reading colors printed in incongruent color names) in which several response systems were competitively aroused, only one adaptively relevant: *Cumulative* (C): progressively slowed response, lowered resistance to interference; *Dissociative* (D): variable resistance to interference; *Stabilized* (S): evenly maintained resistance-level.

Hypotheses regarding general regulatory styles implied in these patterns were applied to several cognitive tasks: detecting hidden faces, learning embedded and isolated materials, discriminating stimuli embedded in a gradually changing context, and Gottschaldt-type tasks. Can behavior on these be predicted from a person's temporal pattern?

SUBJECTS: 29 undergraduates, selected from a larger group tested on the color-word task as particularly representative of the C ($N=9$), D ($N=12$), and S ($N=8$) patterns.

RESULTS: Cumulatives recognized few hidden faces, and especially slowed on Gottschaldt figures involving sharp reorientation as regards embedded figure or obscuring context. They tended to apply solutions more appropriate to earlier figures. They also showed significantly delayed sensitivity to change. Learning of nonsense words by the anticipation learning method disclosed efficient learning of "end-series" and "middle-series," with greater difficulty in learning middle-position words. Dissociatives recognized many hidden faces, fabricated many more, showed exaggerated but

inaccurate sensitivity to change, were quick in recognizing Gottschaldt figures, and tended to learn words nonpreferentially as regards series position, though with an over-all low level of accuracy. Stabilizers recognized a moderate number of hidden faces with few fabrications, and learned embedded words with least loss in efficiency. Sensitivity to change was appropriate, conforming to objective shifts in the stimuli. **CONCLUSION:** Stylistic consistencies observed in temporal patterns of cognitive behavior allow prediction of performance in a variety of cognitive situations. (Slides)

3:20 P.M. Predicting memory behavior from cognitive attitudes toward instability. JAY M. KAPLAN, *Harvard University*. (Sponsor, George S. Klein)

PROBLEM: Previous experiments on perceptual response to unstable visual fields have demonstrated individual consistencies which apparently reflect attitudes of greater or lesser tolerance for the experience of equivocality. Can such perceptual attitudes be usefully generalized to memory-type situations?

SUBJECTS AND PROCEDURE: 40 undergraduates, free of astigmatism, were ranked for perceived tilt induced in a familiar field by aniseikonic lenses. Recognition-time in reporting tilt and degree of tilt (error in adjusting a tilted rod to the vertical) provided measures of readiness to tolerate the lens-induced distortion of the conventional vertical. The *Ss* were also ranked for literalness of immediate recall of two equivocally structured stories: one involving planted internal contradictions, and one distinguished by loosely linked, nonsequential episodes. A thematically well-organized story served as a control. Excessive "rationalizing" efforts and relative poverty of recall of planted contradictory or loosely-fitted elements provided measures of intolerance of equivocality in memory behavior; contrasting tendencies were hypothesized for the "tolerant" group. Reliability-tested scoring criteria were applied to the wire-recorded reproductions.

RESULTS: With *Ss* ranked on lens-scores, the scores for both equivocal stories in extreme "tolerant" and "intolerant" groups significantly separated in the expected direction. Comparable scores for the control-story did not differentiate the groups. Correlation between scores for the equivocal stories was significant. Rectilinear correlations of these scores with tilt scores were significant; control story scores and tilt were insignificantly related. In general, the more readily reported and greater the perceived tilt, the more efficient the recall of equivocal elements of the stories. **CONCLUSION:** Results indicate the generalizability of attitudes of tolerance and intolerance for instability from a perceptual to a memory-type situation. Implications of results for a general cognitive theory of personality are discussed. (Slides)

3:35 P.M. Affectivity as a factor in the perception of the magnitude of food objects. HOWARD L. BEAMS and GEORGE G. THOMPSON, *Syracuse University*.

PROBLEM: To test the hypothesis that a child's perception of the magnitude of food objects will be influenced by the amount of liking or dislike which he has for a given food object.

SUBJECTS: 500 fifth and sixth grade children, 10 to 12 yrs., both sexes, from six public schools in Syracuse, N. Y.

PROCEDURE: A linear rating scale, administered on three different occasions, was used to select those children who consistently showed at least one strong liking and one strong dislike for two different food objects of the dessert type. Seventy such children were found. Each child was then shown, under standard conditions, the actual food object for which he had indicated a strong preference. He was then asked to adjust a kodochrome image of the food object (by movement of a sliding screen, enclosed) until it was in his judgment the same size as the actual object. Four such adjustments were made, each following a five-second presentation of the stimulus. A reading in centimeters of the distance of the screen from the perceiver was taken after each trial. The same procedure was followed with the object or objects for which the subject had indicated a strong dislike. The difference between the average of the four "like" readings and the "life size" reading of the liked object was figured. The same procedure was followed for the disliked object. The difference between the two "difference scores" was then computed and these figures subjected to a correlated *t* test.

RESULTS: The major hypothesis was substantiated. The difference score derived was found to be significant at well below the .01 level of confidence. (Slides)

PERSONALITY ASSESSMENT I

4:00-5:00 P.M., Friday, Williamsburg Room,
Mayflower

S. STANSFELD SARGENT, Chairman

4:00 P.M. Further experiments in assessment of persons through a quasi group-interaction technique. RICHARD S. CRUTCHFIELD, *Swarthmore College*.

The author has recently published a description of a new approach to assessment of persons through a quasi group-interaction technique. It preserves the essential character of a genuine group situation, yet manipulates it so that each person is confronted with an identical conflict arising from the competing demands of cooperation, of independent analysis of the problem, and of maintenance of a stable configuration. Behavior is simply scored, and differences in behavior may be ascribed to personality differences alone.

The original study was of graduate students in natural and social science. Significant correlations were established between group performance and various dimensions of personality and professional promise.

The technique is here extended to intensive assessment of a new sample: 40 fourth-year medical students. The same pattern of relationships with personality is found as before. For example, medical faculty criterion ratings on "Potential success in the profession," "Originality," "Soundness as a person," "Effectiveness as a physician and surgeon," "Diagnostic ability" and "Identification with medicine" all correlate with positive significance with group performance. (Illustration: "Soundness as a person" correlates .33 in the medical sample, .38 in the PhD sample.)

Also, such variables of personality as "Rigidity," "Impulsiveness," "Personal tempo" and "Preference for symmetry" show significant positive correlation, as before. (Illustration: "Rigidity" correlates .44 with group performance in the medical sample, .38 in the PhD sample.) Further detailed analyses of such relationships will be presented.

A still further study with a revised quasi group-interaction technique has been carried out with a larger sample of 109 undergraduates, 60 females and 49 males. Significant sex differences in group performance are found, again consistent with the hypotheses advanced in the original study. Detailed tables showing correlations of group performance with a variety of personality and achievement measures will be presented. (Slides)

4:15 P.M. Comparisons of persons as a means of improving prediction: Method and results. PAUL F. DEMPSEY, *Cornell University*. (Sponsor, Urie Bronfenbrenner)

The problem: 1. To devise and test a method of multivariate analysis which would: (a) be consistent with dynamic theories of personality; (b) permit the division of any sample of subjects into psychologically homogenous subgroups.

2. To test the predictive significance of such groupings.

The Ss were two samples of 40 graduate students at the University of California who participated in an intensive assessment program at the Institute of Personality Assessment and Research. This program yielded a variety of perceptual, cognitive, and attitudinal measures, as well as behavioral and personality ratings. Departmental criterion ratings were also available.

The analytic procedure consisted of interpersonal comparisons on the basis of standard scores on objective measures, followed by the classification of each

subject with respect to every other subject (as "Like" or "Unlike"). This permitted objective division of the sample into two relatively homogeneous subgroups. Repeating the process within subgroups permitted further breakdowns. The stability of the groupings was tested. Correlations between measures and with staff and department ratings were calculated for the total sample and for the various subgroups. Regression equations with department ratings were written.

The stability of the groupings was clearly demonstrated ($r = .97$). Variables uncorrelated in the total sample showed highly significant correlations in the subgroups, different patterns of correlations emerging for the different groups. Three-variable regression equations with department ratings yielded progressively higher multiple correlations as the homogeneity of the groups increased (from .55 for the total sample to an average of .74 for the subgroups).

CONCLUSIONS: The study clearly indicated the usefulness of the method in problems of prediction. It suggested also a means by which complex hypotheses in personality theory and clinical practice may be tested.

4:30 P.M. The analysis of social sensitivity (empathy). **URIE BRONFENBRENNER, PAUL F. DEMPSEY, DORIS M. KELLS, and HOWARD SHEVRIN, Cornell University.** (Sponsor, Urie Bronfenbrenner)

PROBLEM: In an interpersonal situation in which both A and B are participants, to what aspects of B's psychological state does A become sensitive, and by means of what cues is this sensitivity achieved?

SUBJECTS: Two groups of 40 college students. The data from the first group are used to develop the hypotheses tested on the second group. (At a later stage, methods will be validated with 40 community residents about whom detailed behavioral and personality data will be available.)

METHODS: 1. Pairs of same-sex Ss participate in a series of two sociodramas which are observed and tape-recorded.

2. After each sociodrama, the Ss are asked to write down independently their impressions about the experience they have just had. Then each S is asked to approximate what his partner has written.

3. A systematic content analysis is made both of the original protocol and the approximation. The analysis covers both literal meanings and projective features of the material.

4. A's "sensitivity" is evaluated in terms of the degree to which his approximation of B's protocol shifts away from his own original response toward B's original response. This shift is noted both in relation to literal content and projective features. In this way

both "conscious" and "unconscious" sensitivity may be tapped.

5. A is also asked to pick out, from a series of excerpts written by other B's, the passages most closely resembling those of B, his partner. Actually three excerpts written by his partner are included. A's success in selecting these excerpts is used as an additional index of sensitivity.

RESULTS: Quantitative data are reported describing the types of material to which sensitivity is shown, degrees of successful approximation, and the types of approach (i.e., ways of looking at situations) characteristic of persons exhibiting different types and degrees of sensitivity.

4:45 P.M. Personality assessment and the prediction of academic success. **GEORGE G. STERN, University of Chicago.**

PROBLEM: To construct a hypothetical personality model from analysis of the situational demands implicit in an institution, and to predict student role-fulfillment by comparing this model criterion with the personality organization characterizing individual students.

SUBJECTS: 16 students in two professional schools, representing individuals judged by the respective faculties to be exceptionally good or poor students in terms of over-all performance.

PROCEDURE: Analysis of the bases on which faculty identification with students was maintained permitted the construction of a hypothetical personality model, defining the essential conditions for effective personal function within these schools. Intensive assessment of individual students was made, based on Wechsler-Bellevue, Rorschach, TAT, Sentence Completions, Figure Drawings, and responses to semiprojective questions. Global estimates of personality organization for individual subjects were compared with the hypothetical model. Work-ups of both cases and models were drawn from a formalized framework for the description of personality, ensuring comparability of conceptual structure.

RESULTS: The extent to which correspondence obtained between the necessary conditions for satisfactory role-fulfillment, represented by the personality model, and the personality characteristics of individual students, as revealed through psychodiagnostic testing, was in complete accord with independent faculty judgments of student adequacy. These judgments were not revealed to the assessors until after predictions were made. Major parameters of the models derived for each institution were somewhat similar, being restricted primarily to interpersonal relations, energy level, and goal orientation. The models were also of value for the evaluation of objectives and practices characterizing these schools.

CONCLUSIONS: Assessment criteria based upon conditions for satisfactory student role-fulfillment facilitates the selection of students for specific academic environments. Implications for assessment methodology, including more economical diagnostic and predictive techniques, are also discussed.

PERSONALITY ASSESSMENT II

5:00-6:00 P.M., Friday, Williamsburg Room,
Mayflower

DWIGHT W. CHAPMAN, Chairman

5:00 P.M. Individual interaction effects within an assessment team. HUGH W. LANE, MORRIS I. STEIN, and GEORGE G. STERN, *University of Chicago*. (Sponsor, George G. Stern)

The interaction between clinicians and teachers in an assessment of elementary school children was studied by comparing teacher and clinician evaluations of the students, and the extent and direction of shifts in these evaluations as increments of information about the students were introduced. Q-technique facilitated the recording and comparison of evaluations. A previous paper reported over-all group effects in terms of the reduction of stereotypy, identification and projection, and increased agreement on the part of the assessors during the course of the project.

The present paper reports and discusses an analysis of individual interaction effects within the group. Such interaction did not begin until the fourth or case conference Q-sort. The patterns of significant correlations within and between sorters before and after the case conference provide indices for rating assessors on the stability, originality and adequacy of percept, and for evaluating effects upon the group and the individual of group participation by respective assessors.

The differential performance of assessors is demonstrated. From the correlation matrices patterns are derived identifying individuals with differing degrees of clinical insight, resistance to change, and orientation to the group. The extent to which group goals were being achieved was revealed and significantly divergent group members were identified.

Potential applications of the technique include: (a) study of the dynamics of small group processes, (b) evaluation of diagnostic instruments, (c) evaluation of trainees, and (d) quantification of clinical assessments through the correlation of pooled sorts with a criterion model.

5:15 P.M. "Intelligence" versus intelligent behavior. ROBERT F. PECK, *University of Chicago and Worthington Associates, Inc.*

PROBLEM: To discover the determinants of intelligent behavior, their relative significance, and their relationship to test IQ.

SUBJECTS: 34 adolescents studied intensively from 1942-1949, when they were sixteen; divided equally by sex; largely upper-lower and lower-middle in social class; ranging from 77 to 147 in test IQ.

PROCEDURE: Annual IQ tests, projectives, interviews, sociometrics, and observational data were used. A staff of eight, after an intensive longitudinal case study of each subject, rated him on 30 personality variables. The reliability of the averaged eight ratings was .96. The central variable for this study was "rationality": the degree to which one perceives life situations accurately and acts in an intelligent, effective way to achieve his purposes. This was correlated with the other variables and their quantitative relationships examined. Following this, a factor analysis was performed.

RESULTS: Rationality correlated .65 with intellectual capacity, which accounts, at most, for 42% of the variance. Much more highly correlated with rationality were psychological autonomy (.91); consistency of personal aims and values—personality integration —(.88); emotional maturity (.84); accuracy of self-perception (.86); concern for other people (.85); emotional stability (.72). These emotional and integrative variables can thus account for upwards of 80% of the variance in rationality. Factor analysis found them clustered as an independent "primary" lying halfway between two orthogonal factors, "Spontaneity" and "Willing Social Conformity." Thus, intellectual endowment furnishes the potentiality, but intelligent behavior seems much more importantly determined by the presence of positive, unconflicted attitudes toward the social world and stable, mature emotional reactivity. It may be that the person who has developed positive incentives to act as his society expects, and moreover is acting spontaneously in the very process of "conforming," has his capacities to observe, reason, deduce principles, and apply them rationally, freed to operate to their maximum. High genetic intelligence is doubtless necessary for handling complex problems; but it is not sufficient for intelligent behavior. Rationality was found to vary widely in children of the same IQ level, reinforcing the assumption that the role of emotions in perception is decisive, and not to be legitimately separated from "intellect" when the question is, "How intelligent is a person's actual behavior?"

5:30 P.M. Personalized rating responses; An approach to personality evaluation. ELI S. FLYER, *Human Resources Research Center, Lackland AFB*. (Sponsor, Abraham Carp)

PURPOSE: In most rating methods emphasis has been

placed upon the reliability and validity of pooled ratings, and the "personal equation" in rating behavior has been relatively neglected. It is the purpose of the study to describe two techniques that have been based upon personalized rating responses, as well as the meaningfulness of the responses that they elicit.

METHOD AND RATIONALE: In both the "picture-choice" and "projective trait" techniques the rater is required to (a) rank stimulus materials (pictures of people or actual people) along a like-dislike continuum, and (b) rate the stimulus materials for various personality traits. Traits are selected that are not conducive to valid stimulus structuring, and the response material is evaluated by determining the relationships between likeability and personality trait ratings.

Since the stimulus materials are unstructured in terms of the traits used, rating behavior is considered to become dependent upon (a) the way that the stimulus materials are viewed in terms of relative likeability, and (b) the way the traits are viewed in terms of their relative acceptabilities. The likeability continuum for the stimulus materials is considered transferred to the traits rated, allowing the traits to be ranked in terms of relative likeability.

RESULTS: When the "picture-choice" data obtained from 250 university students and 250 Air Force Officer Candidates were related to various forms of self-rating, the median correlation coefficient was found to be .72. Raters imputed traits they considered "most personally acceptable" to pictures that they liked, and traits considered "least personally acceptable" to pictures that they disliked.

The analysis of the "projective trait" data obtained from 75 Air Force Officer Candidates indicated that self-ratings were related to personalized trait ratings. The median correlation coefficient between self-rating on a trait and imputing the trait to liked associates was .52.

CONCLUSIONS: Personalized trait ratings are related to self-ratings and provide a method for obtaining indirect affective reactions to personality traits.

5:45 P.M. A proposed method for measuring empathic ability. IRVING E. BENDER and ALBERT H. HASTORF, *Dartmouth College*.

PROBLEM: Attempts to measure empathic ability have usually entailed the comparison of forecasted test responses with the actual test responses of an associate. This measure leaves uncontrolled the amount of similarity between the forecaster and the person predicted for. If the similarity between forecaster and associate is great, the possibility exists that the forecaster may be projecting his self-perception on the forecasted responses and consequently would have

a high empathy rating. The usual definitions of empathic ability imply a perception less clouded with autistic components. The purpose of this paper is to present evidence for a corrected empathy rating which is designed to control the factor of projection. The corrected empathy rating is derived by answering the question: Was the S's forecast more like the responses of the associate or was the forecast closer to his own responses to the test?

SUBJECTS AND PROCEDURE: 50 male undergraduates forecasted the responses of four associates on a test of 42 items concerned with feelings and attitudes. A corrected empathy rating was derived by determining whether the forecast came closer to the associate's responses or to the subject's own responses.

RESULTS: An earlier study showed a correlation of .54 between an uncorrected empathy rating and similarity, however, in this study the corrected empathy rating was found to be not significantly related to similarity. Furthermore, when the forecasters were ranked for each of their four predictions on the basis of the corrected empathy rating the coefficients of correlation between these ranks were all in a positive direction.

CONCLUSIONS: It may be concluded that the corrected empathy rating is a refined measure of empathic ability which controls for the factor of similarity. Moreover the data from the rank orders support the hypothesis that forecasters are consistent in empathic ability.

STUDIES IN PERSONALITY

9:50-10:50 A.M., Saturday, East Room, Mayflower

M. BREWSTER SMITH, Chairman

9:50 A.M. Level of aspiration behavior and feelings of adequacy and of self acceptance. LOUIS D. COHEN, *Duke University*.

PROBLEM: The present study is an attempt to investigate some self attitudes as related to level of aspiration behavior.

SUBJECTS: 50 patients in a general hospital—23 males, 27 females.

PROCEDURE: Each S was examined by the use of the Rotter Aspiration Board and the Rorschach. A detailed analysis of two major concepts (feelings of adequacy and self acceptance) was prepared, with a rating scale for each. The level of aspiration result considered here was the average discrepancy score (D score). The Rorschach protocols, devoid of identifying data, were analyzed and the subject rated on the two prepared scales. The reliability of ratings by two independent raters was .53 (feelings of adequacy) and .75 (self acceptance), the first significant at the 5% level of confidence and the second at the 1% level.

RESULTS: Correlations between D scores and the

feelings of adequacy were $r = -.03$ and $\eta = .07$ and $.27$. Between D scores and self acceptance $r = .29$ and $\eta = .40$ and $.49$, the latter results reliable at the 5% level of confidence or better as determined by ϵ^2 .

CONCLUSIONS: Goal setting behavior on a level of aspiration task is not significantly influenced by our variable feelings of adequacy, but is influenced by the variable self acceptance. The linear relationships are not reliable, but curvilinear relationships are. Inspection of the scatter diagram suggests the following: Both very high and very low goal setting are related to a high degree of self rejection. Low positive or low negative goal setting is related to self acceptance. These results suggest a further exploration of the concepts feelings of adequacy and self acceptance.

10:05 A.M. Expectation-stereotypes as a determinant of level of expectation ("aspiration"). ROBERT G. BALLARD, *University of Pennsylvania*.

PROBLEM: Several investigators have suggested that Ss may use high positive discrepancy scores in level of expectation experiments to "tell" E that they possess certain desirable qualities not apparent in their actual performance. Such expectation setting could be looked upon as a channel of social communication. For this communication to be successful, certain culturally common expectation-stereotypes must exist, relating personal qualities of the performer to expectations stated concerning future performance. This experiment was designed to investigate the possible existence of such stereotypes, as revealed by their influence on expectations that one person states for future performance of another person.

SUBJECTS: 54 psychologically naive undergraduates.

PROCEDURE: The Ss were shown a personality sketch describing a fictitious "performer." The content of this personality sketch was different for each of three equal experimental groups. Each S was read a series of performance scores attributed to this "performer"; after each score, he stated an expectation for the next score. The same set of scores was reported to all Ss. RESULTS: Obtained data supported the concept of expectation-stereotypes, since Ss expressed consistent and significantly different expectations concerning the future performance of persons described as having different traits. Differences that appeared for early performance scores remained equally clear for final performance scores. There was no tendency for expectations given to different sketches to become more alike, although intervening reported performances were identical. Thus, expectation-stereotypes were also resistant to modification by "objective facts," as represented by performance scores.

These findings offer indirect support for the notion that "expressive" expectation setting may exist in

conventional level of expectation experiments. Further, they identify a new factor that may be active in determining expectations that one person states for future performance of another person.

10:20 A.M. Authoritarian and equalitarian personality syndromes and intolerance of perceptual ambiguity. ISADORE KRASNO, *University of Pennsylvania and Wilkes-Barre VA Hospital*.

PROBLEMS: The main hypothesis, derived from the theory and exploratory experiments of Else Frenkel-Brunswick and co-workers, was that "authoritarian" individuals as a group were more intolerant of perceptual ambiguity than "equalitarian" individuals as a group. The subhypotheses were:

1. The "authoritarian" group would have a shorter mean judgment time to conflict producing stimuli than the "equalitarian" group, holding response to non-conflict producing stimuli constant.

2. The "authoritarian" group would persevere longer than the "equalitarian" group.

The 60 Ss for each of the groups were college students chosen from a pool of 400 subjects on the basis of their responses to three attitude scales, the E scale, F scale, and the TFI scale; each measuring a facet of the "authoritarian-equalitarian" syndrome. The *minimum criterion* used in selecting the two groups was that of being in the upper or lower quartile respectively in at least 2 out of 3 scales with the third scale not falling in the opposite quartile. Each group was divided into subgroups of 20 Ss who were assigned to one of three methods of presenting the perceptual stimuli, Series, Random, or Conflict-Series, so that for each method of presentation there was an "authoritarian" and "equalitarian" subgroup. The stimuli consisted of black line drawings of a Pekinese dog serially changing to a Persian cat with the middle of the series ambiguous or conflict producing, but with all stimuli clearly structured. The stimuli were *standardized* prior to use in the experiment proper.

From the results all hypotheses were rejected and the conclusions reached were: (a) Intolerance of ambiguity *does not* generalize from the social and emotional spheres to the perceptual sphere. (b) Rigidity is a specific factor which *does not* manifest itself in the solution of any problem social or non-social in nature.

10:35 A.M. Generalization of problem-solving rigidity. MORTON WIENOR, EMORY L. COWEN, and JUDITH HESS, *University of Rochester*. (Sponsor, Emory L. Cowen)

PROBLEM: Problem-solving rigidity has been defined as a tendency to adhere to an induced behavior when it ceases to represent the most direct path to a goal.

Previous research has demonstrated that behavioral rigidity may be influenced by intra-organismic factors (i.e., age, intelligence) and various experimental conditions (i.e., stress, number of set problems). Nevertheless, with these factors held constant, individual differences in rigidity behavior remain. The present authors hypothesize that these differences are a function of not only specific attitudes toward the tasks, but also of a consistent personality-related mode of problem-solving behavior. Therefore positive relationships of rigidity behaviors, in various problem-solving situations, structurally similar but tapping different areas of functioning, are postulated.

SUBJECTS: 59 college students—male and female.

PROCEDURE: The three tasks used were the Luchins water jar technique and two new measures—an alphabet and motor maze. The Ss were given each of the three tasks in individual administration. For each instrument the score was the number of rigid solutions given.

RESULTS: 1. The motor maze was found to be too easy in its present form as evidenced by the extremely high incidence of zero rigidity scores. Since the score distribution was also not comparable with the other two, further analysis based on this instrument will not be reported.

2. Because of the essentially dichotomous distribution on the remaining two scales, a phi coefficient was computed (+.46) as an estimate of relationship. Test of significance by chi square yielded a p value of .001. A tetrachoric r of .59 estimates the relationship between measures if the distribution were normal.

CONCLUSION: Under constant experimental conditions and with equivalent task difficulty, the data support the notion of generality of problem-solving rigidity behavior.

SOCIAL INFLUENCES ON OPINIONS

9:50–10:50 A.M., Saturday, Williamsburg Room, Mayflower

SOLOMON E. ASCH, Chairman

9:50 A.M. The anchorage of opinions in reference groups. HAROLD B. GERARD, *New York University*.

PROBLEM: To demonstrate that the subjective validity with which an individual holds a group anchored opinion is related to (a) his attraction to the group, and (b) the degree to which others in the group agree with his opinion.

SUBJECTS: 72 volunteers from undergraduate political science and psychology classes.

PROCEDURE: Three persons were assigned to each group on the basis of their initial opinion on a specific issue. The groups were formed to differ as to the

degree of agreement among the members. These groups were distributed equally between conditions of high and low attractiveness of the group for its members (manipulated by verbal instruction). The Ss were allowed to discuss and revise their opinions. In order to measure subjective validity, Ss returned individually one week later and were faced by a person who appeared to be another S (actually he was a paid participant) who challenged each person's opinion during a ten-minute discussion. They were allowed to change their opinions. The influence process was observed during each discussion.

RESULTS: More of those Ss who were in disagreement with others in their reference group changed their opinions to agree with the paid participant than did those who were in agreement. More Ss in the low attraction conditions changed toward the paid participant than did those in the high attraction conditions. The Ss who were in agreement with others in their reference group attempted more influence upon the paid participant than did those who were in disagreement. This difference was greater in the high than in the low attraction conditions.

CONCLUSION: Using attempted influence upon and change toward the paid participant as indices of subjective validity, we find that the subjective validity with which an opinion is held is affected by one's agreement (on that opinion) with others in the reference group and by the attractiveness of that group for the member.

10:05 A.M. Salience of membership and resistance to change of group-anchored attitudes. HAROLD H. KELLEY, *Yale University*.

PROBLEMS: Does the degree to which, in a given situation, a specific group membership is salient for a person (i.e. present and prominent in his conscious or unconscious awareness) have any bearing upon the resistance to change of attitudes supported by the group? The hypothesis tested was: When group-anchored attitudes are exposed to counter-pressures, their resistance to change will be greater with high salience of the relevant membership than with low. Also of interest was the relative permanency of changes accomplished under conditions of high and low salience.

SUBJECTS: Salience of Catholic Church membership was studied for high school and college students. This report presents the results for 207 high school students, 70 of them Catholics.

PROCEDURE: Public high school students were tested during regular class periods when salience of church membership could be expected to be low. They first read a brief article (some receiving material to heighten the salience of Catholic membership and others receiving neutral material) and then answered

an appropriate attitude questionnaire. For some Ss the questionnaire contained a change-directed communication in the form of simulated consensus of opinion attributed to other high school students. Three experimental variations (high salience, no communication; high salience, communication; and low salience, communication) were compared as to attitudes expressed immediately and three days later. RESULTS: Both "communication" variations showed significantly lower attitude scores than the "no communication" variation. Of the Catholics given the communication, high salience subjects were influenced significantly less than lows. No such difference existed for non-Catholics. Thus, the hypothesis was confirmed for this high school population. Concerning later attitudes, there was no difference between highs and lows in rate of loss of the initial effects.

This experiment was carried out as part of the research program on attitude change at Yale University.

10:20 A.M. The influence process as affected by deviance, attraction, and external validation. BERTRAM H. RAVEN, LEON FESTINGER, HAROLD B. GERARD, BERNARD HYMOVITCH, and HAROLD H. KELLEY, *University of Michigan, University of Minnesota, New York University, Boston University, and Yale University*. (The study was conducted at the Research Center for Group Dynamics, University of Michigan.)

PROBLEM: To test further hypotheses deriving from a broader theoretical framework, concerning the process of social influence as affected by: (a) deviance from a group opinion, (b) individual attraction to group, and (c) possibility of external validation of the opinion.

SUBJECTS: 64 groups with 6 to 9 undergraduates in each.

PROCEDURE: The Ss read a labor case study and took positions along a continuum predicting future behavior of the union. The "Deviance-Conformity" variable was manipulated within each group by presenting a false consensus to each individual; i.e. approximately two-thirds of the individuals were each made to believe that all the others in their group had taken an opinion which differed radically from their own; the remainder were made to believe that practically everyone agreed with them. Half the groups were told that there was a correct prediction (external validation) which would be told to them later; the others were told that there was no correct prediction. Half of each of the above treatments were High Cohesive, i.e. verbally induced to feel highly attracted to the group; the remainder were Low Cohesive. The Ss then communicated about the case through written messages and indicated opinion

change and confidence in their own opinion at various stages.

RESULTS AND CONCLUSIONS: The derived hypotheses were substantially supported. As compared to Deviates, Conformers were uniformly more confident in their opinions and seldom changed, while Deviates changed toward the group norm. Conformers also communicated more than Deviates. Highly attracted Ss also communicated more, even obscuring the Conformer-Deviate difference in High Cohesive groups. More High Cohesive than Low Cohesive Deviates changed toward conformity. The possibility of external validation of opinion reduced communication among Deviates. Though number of changers did not increase with external validation, those who did change, more often changed to complete conformity.

10:35 A.M. An experimental study of the influence of role playing on opinion change. BERT T. KING and IRVING L. JANIS, *Yale University*. (Sponsor, Irving L. Janis),

PROBLEM: Overt verbalization has been found to result in a marked gain in rote learning of factual verbal material. Does overt verbalization induced by role playing have a similar facilitating effect on the acquisition of new beliefs or opinions?

SUBJECTS: 106 male college students from an undergraduate psychology course.

PROCEDURE: The "before" test (an opinion questionnaire) was administered during a regular class session. Several months later, the subjects were assigned at random to two main experimental groups: (a) *active participants*, who, with the aid of a prepared outline, delivered a persuasive communication (playing the role of a sincere advocate of the given point of view), and (b) *passive controls*, who silently read and listened to the same communication.

In the experimental sessions, three different communications were used, each of which was presented by a different active participant. Opinion measures obtained at the end of the session were compared with the "before" measures. "Before" and "after" measures were also obtained from another control group which was not exposed to any of the communications.

RESULTS AND CONCLUSIONS: On two of the communications, the active participants showed significantly more opinion change than the passive controls. On the third communication, both groups showed the same amount of opinion change but the active participants, nevertheless, showed a higher level of confidence in their postcommunication opinions. The findings support the conclusion that overt verbalization induced by role playing augments the effectiveness of a persuasive communication.

Supplementary observations were made pertinent

to possible mechanisms underlying the gain in opinion-change due to active participation. The main hypothesis suggested by the available findings is that satisfaction with one's own performance is a key mediating variable.

This experiment was carried out as part of the research program on attitude change at Yale University.

PREJUDICE AND INTER-ETHNIC RELATIONS

11:00-12:00 M., Saturday, Williamsburg Room, Mayflower

MARIE JAHODA, *Chairman*

11:00 A.M. Ethnocentrism and misanthropy. JOSEPH ADELSON and PATRICK L. SULLIVAN, *Bennington College and Oakland VA Mental Hygiene Clinic.*

PROBLEM: Recent researches suggest that ethnic prejudice is related to general personality functioning; the ethnocentric person is given to generalized hostility, suspiciousness, and cynicism. These attributes suggest the existence of an underlying and perhaps basic misanthropic trend.

Turning to the questionnaire items used in the investigation of attitudes towards the ethnic minorities, we note that these items ordinarily contain at least two components: (a) a reference to a particular ethnic minority, and (b) a statement, usually derogatory, pertaining to some presumed attribute of this group. It is assumed, if only implicitly, that there is a necessary linkage in the respondent's imagery between the minority group and the invidious imputation. By formulating ethnocentrism as misanthropy, however, we meet the possibility that assent to these derogatory statements may reflect or express hostility towards people *in general*, or that the designation of the specific outgroup is not as crucial in securing assent as is the imagery of hate and exclusion.

PROCEDURE AND RESULTS: A 29-item questionnaire was constructed in the following manner: Items from existing scales of ethnic prejudice were rewritten so that the terms "people" or "most people" were substituted for the specific minority groups originally designated. Administered to 221 college students, this scale was found to be correlated 0.43 with a separate scale of general ethnic prejudice. Reliability (corrected test-retest, 0.79) and internal consistency appeared adequate for a preliminary formulation.

DISCUSSION: The results are discussed with reference to: (a) the connections between prejudice and misanthropy; (b) the implications of misanthropic imagery for attitude scale construction; (c) the prejudiced person's concept of the ingroup; (d) indications for further research.

11:15 A.M. The measurement of social interaction among Negro and white children in a housing project. BERNARD G. ROSENTHAL, DONALD MILLER, and FRANK TERNENYI, *University of Chicago.* (Sponsor, Bernard Rosenthal)

The study abstracted here is one phase of a comprehensive research of an interracial housing project from its inception over a period of one year. This paper is concerned with the measurement of the interracial play and work behavior of children in the project from 3 to 16 years as it occurred in the project buildings, and at other sites. For twenty hours a week the interactions of children were observed at various periods of the day. A system of forty categories of description of such interaction was developed according to a theory of social contact and group functioning and was refined till very high reliabilities were established for most of the categories used by two independent observers. Some of the categories used were: isolate, isolate with interaction, group member with peripheral membership, cooperation, etc. Categories were given operational definition to get at the following problems: Are there more isolates among Negro or white groups? What is the structure of Negro groups as opposed to white groups? What is the development in terms of size, structure, nature of interaction among these groups from the beginning of the project to a year later?

The following results will be presented: the methods developed including the operational definitions of categories used. Reliabilities and usefulness of these techniques indicate they may be utilized with high success for measurement of social interaction in a natural situation. Other results include the stages of development that Negro and white children go through from beginning of project over a long period of time. These stages begin with isolation or segregation and pass through several phases till superficial integration (the situation at present) is reached. Other data include the changing structure of Negro in contrast to white groups, the changing structure and size of mixed groups, etc. Statistical documentation for all points will be presented. (Slides)

11:30 A.M. White attitudes towards Negro-white interaction in an area of changing racial composition. ALVIN E. WINDER, *University of Chicago.*

In 1948 when the United States Supreme Court declared restrictive covenants unenforceable, it opened the way for a widespread invasion of white neighborhoods by Chicago's 600,000 hard-pressed Negro residents.

Within this context the present study is concerned with the effect of biracial contact on attitudes of white

residents of the invaded community towards the Negro in-migrants. Specifically, what kinds of situations involving biracial contact lead to intergroup understanding, and what kinds lead to racial prejudice? The study is also designed to test the hypothesis that white attitudes towards intergroup contact vary according to the social status of the group experiencing contact.

Ten interactive situations describing typical biracial contacts within the community were composed as news items. These items were scored to obtain a level of acceptance of rejection of the situations and the degree of crystallization of attitudes towards the situations.

The items were presented to 90 respondents from three Chicago areas. The first area was free of invasion, the second area was under threat of invasion, and the third contained Negro residents living side by side with the remaining white families. Each area was further divided into a middle and a lower status subcommunity.

Attitudes towards biracial contact became more hostile with increasing residential contact. The middle status residents were accepting in the unthreatened area, hostile in the threatened area, and superficially accommodating in the invaded area. The lower status residents were most hostile in the invaded area. A lack of accommodation in this area was due to the shortage of lower income housing in Chicago and the resulting competition for limited housing between lower status whites and Negroes.

Attitudes that were satisfactory before the Negro in-migration lost crystallization during the invasion as they changed into attitudes functionally more appropriate to the climate of the invasion.

11:45 A.M. The effects of equal-status residential contacts with Negroes on the ethnic attitudes of white persons. DANIEL M. WILNER and ROSABELLE PRICE, *New York University*. (Sponsor, Daniel M. Wilner)

PROBLEM: How does residential proximity to Negroes affect the behavior and attitudes of white persons?

SUBJECTS: About 800 white women living various distances from Negro residents in four relatively low-rental, biracial public housing projects in four eastern cities. The proportion of Negroes was approximately 10% in each project. The white and Negro residents in each project were very similar in age range and educational level. The economic level of all residents was fairly low; median annual income did not exceed \$3,700.

PROCEDURE: White housewives were interviewed at home in Spring, 1951, using a lengthy interview schedule which explored the extent of face-to-face contact with Negroes in the projects, and many dimensions of attitude.

RESULTS: In all four projects, white respondents living near Negroes reported more conversational and neighborly contacts with Negroes than did white residents living further away. White residents living near Negroes also were significantly different from the other white residents in that they were more likely to hold favorable beliefs about Negroes, and also to hold them in high esteem. There was evidence of considerable generalization of attitudes toward Negroes not living in the housing projects. Chi-square tests of significance of differences were used throughout. An extensive analysis of factors other than proximity to Negroes (e.g. self-selection) that might be responsible for the findings, reveals that such factors did not play a role.

CONCLUSIONS: Physical proximity to Negroes leads to the probability that numerous biracial conversational contacts will take place. These conversational contacts—especially when the Negro and white participants share the same socio-economic levels and have similar roles in the community—lead to diminution of stereotyped beliefs about Negroes and to the assessment of Negroes as individuals. These findings agree substantially with those of the Deutsch and Collins study.

THE SOCIETY FOR THE PSYCHOLOGICAL STUDY OF SOCIAL ISSUES

COUNCIL MEETING

9:00-5:00 P.M., Sunday, Council Room, Statler

BUSINESS MEETING

7:30 P.M., Sunday, Presidential Room, Statler

STUART W. COOK, President

CIVIL LIBERTIES AWARD AND PRESIDENTIAL ADDRESS

9:00 P.M., Sunday, Presidential Room, Statler

STUART W. COOK. Contact and Attitude Change in Intergroup Relations: Some Theoretical Considerations.

SYMPOSIUM: SOCIALIZATION IN CROSS-CULTURAL PERSPECTIVE*4:00-6:00 P.M., Monday, Presidential Room, Statler**(Co-sponsored with Divisions 7 and 8. See Division 8's program.)***SYMPOSIUM: ROLE OF PSYCHOLOGY IN THE CONDUCT OF INTERNATIONAL RELATIONS***8:40-10:40 A.M., Wednesday, Williamsburg Room, Mayflower*

ANGUS CAMPBELL, Chairman

Participants: RAYMOND A. BAUER, OTTO KLINEBERG, WALTER LAVES, *Mutual Security Administration*, LEO LOWENTHAL, *Voice of America*.**SYMPOSIUM: PSYCHOLOGICAL IMPACT OF OLD AGE AND SECURITY INTERESTS ON LABOR-MANAGEMENT RELATIONS***9:50-11:50 A.M., Thursday, Chinese Room, Mayflower**(Co-sponsored with Industrial Relations Research Association.)*ARTHUR ROSS, *Wage Stabilization Board*,
ChairmanParticipants: WILLIAM CAPLES, *Inland Steel Company*, W. E. SOLENBERGER, *U.A.W.-C.I.O.*, MARIE JAHODA.**KURT LEWIN AWARD***4:00 P.M., Thursday, Presidential Room, Statler***INDUSTRIAL RELATIONS AWARD***5:00 P.M., Thursday, Presidential Room, Statler***SYMPOSIUM: INTERRELATIONS BETWEEN PSYCHOANALYTIC AND SOCIOLOGICAL THEORIES: THE PROBLEM OF AUTHORITY FORCES INTERNAL TO AND EXTERNAL TO THE INDIVIDUAL***9:50-11:50 A.M., Friday, Ballroom, Mayflower**(Co-sponsored with Division 8)*

BERNARD ROSENTHAL, Chairman

Participants: ROBERT WAELDER, TALCOTT PARSONS, ELSE FRENKEL-BRUNSWIK, NATHAN LEITES.

SYMPOSIUM: TEACHING OF INTRODUCTORY SOCIAL PSYCHOLOGY*1:40-3:40 P.M., Friday, Chinese Room, Mayflower**(Co-sponsored with Division 2)*

ROBERT P. HOLSTON, Chairman

Participants: S. S. SARGENT, WILBERT S. RAY, H. W. DANIELS, T. R. VALLANCE, CHARLES WRIGLEY.

SYMPOSIUM: THE EFFECTS OF SEGREGATION*4:00-6:00 P.M., Friday, Ballroom, Mayflower*

GERHART SAENGER, Chairman

Participants: ALFRED MCCLUNG LEE, ISIDOR CHEIN, KENNETH CLARK, WAYNE DENNIS.

DIVISION ON ESTHETICS**RESEARCH PAPERS***9:50-10:35 A.M., Wednesday, North Room, Mayflower*

KATE HEVNER MUELLER, Chairman

9:50 A.M. Test-retest reliability in ranking as a function of "esthetic exhaustion." EVELYN M. WEST, *University of Pittsburgh*. (Sponsor, A. W. Bendig)

PROBLEM: The literature contains contradictory statements: Guilford says that the ranking method is more

prone than paired comparisons to exhaust the esthetic sense; Woodworth, who cites Guilford in his bibliography, states the converse. A clarifying hypothesis suggested the present research: If increasing amounts of esthetic judgments exhaust the S's "esthetic sense," his test-retest reliability should decrease as a function of the number of such judgments interpolated between the first and second ranking of the same stimuli.

SUBJECTS: 25 normal-visioned male and female undergraduates in introductory psychology.

PROCEDURE: The Ss were divided into five groups of

five differing in amount of activity interpolated between 1st and 2nd rankings ("esthetic merit") of a pack of 12 pictures—this pack having been randomly assembled. Time between the 1st and 2nd rankings was constant. The varying amount of intervening esthetic behavior was measured in terms of the number of other packs, similarly ranked (0 to 4). Agreement between 1st and 2nd rankings for each *S* was computed by rank difference correlation.

RESULTS: Analysis of variance of the rho's demonstrated significant differences between the groups. Separate *t* tests showed significant differences for pairs of groups except for the two groups with zero and one intervening pack ranking. A rectilinear decreasing relation was found between amount of intervening pack rankings and mean group rho's. No significant correlation was found between rho and age, IQ, or *S*'s self-rating of "artistic experience" on a 5-mm. scale with five categories.

CONCLUSIONS: Taking test-retest reliability as an index of "esthetic exhaustion," we found this phenomenon with the ranking method. When, between 1st and 2nd ranking of material along the "esthetic merit" continuum, similar judgmental behavior intervenes, the correlation between the 1st and 2nd rankings decreases in proportion to the amount of intervening behavior. These results suggest that a similar "exhaustion" may influence human judgments recorded for other types of psychometric scales.

10:05 A.M. Masculinity and femininity in relation to preferences in music. CARL H. RITTENHOUSE, *Human Resources Research Center, Lowry AFB.* (Sponsor, Paul R. Farnsworth)

It was hypothesized that preferences in music might be related to masculine and feminine personality trends and that both male and female groups would prefer masculine to feminine music because of the possible predominance of masculine values in American culture.

Twenty-two phonograph records were classified as masculine or feminine by college sophomores of both sexes, using the definition "whatever is considered masculine (feminine) in our culture." The five records most consistently rated masculine were then paired with the five most consistently rated feminine.

The Masculinity-Femininity scale of the Minnesota Multiphasic Personality Inventory was administered to 50 male and 51 female *S*s. Next the five pairs of records were played for all *S*s, and they indicated which one of each pair they preferred. They were told nothing about the records with regard to composer, composition, or previous M-F classification.

The same *S*s heard the records again two weeks later. They indicated preferences as before, but this time they were given the previously determined M-F classifications before the playing of each pair.

Analysis indicates that certain selections can be classified as masculine or feminine with great consistency. Masculine-rated music was preferred, to a statistically significant degree, by both sexes, and knowledge of the classifications brought about an even greater preference for masculine music. This finding may be evidence for the existence of a tendency toward the predominance of masculine values in our culture.

For both sexes small but significant correlations were found between M-F scores on the MMPI and number of masculine choices, i.e., masculine-tending individuals made more masculine choices than did feminine-tending individuals. Thus, personality orientation as regards masculinity and femininity seems to be significant in determining responses to music. This finding may bear on the problem of selecting music to be used in therapy.

10:20 A.M. The problem of meaning in music. MELVIN G. RIGG, *Highlands University.*

Several studies have shown that listeners do not arrive at the same results when they set out to formulate a program for a musical selection. However, there may be general agreement with regard to the prevailing mood of portions of the composition. Various investigations have been made by K. B. Watson, Hevner, Gundlach, Campbell, Shimp, Hampton, and the writer. To a considerable extent these studies have arrived at the same list of moods or emotions which may be represented in music, and they also are in general agreement as to the specific features of the music which account for them. If we reduce the multiplicity of emotional terms to a few key words, we can characterize musical selections as dignified, sad, pleading, tranquil, humorous, happy, exciting, and majestic. These mood effects seem to be the result of variations from slow to fast tempo, low to high register, soft to loud intensity, variations in the amount of dissonance, changes from minor to major mode, and variations in rhythm, whether firm, flowing, or irregular.

BUSINESS MEETING AND PRESIDENTIAL ADDRESS

10:40-12:30 P.M., Wednesday, North Room,
Mayflower

KATE HEVNER MUELLER. The Problem of Form.

DIVISION OF CLINICAL AND ABNORMAL PSYCHOLOGY

ROUND TABLE: GRADUATE TRAINING IN PSYCHOTHERAPY

8:40-10:40 A.M., Monday, Williamsburg Room,
Mayflower

LESLIE PHILLIPS, Chairman

Participants: ARTHUR L. BENTON, ELIOT H. ROD-
NICK, WILLIAM U. SNYDER.

MEETING OF OUTGOING EXECUTIVE COMMITTEE

12:00-6:00 P.M., Monday, Chinese Room, Mayflower

SYMPOSIUM: CLINICAL PREDICTIONS OF INDIVIDUAL ADJUSTMENT FROM PERSONALITY TEST PROTOCOLS: AN EXPERIMENTAL STUDY OF AN AIR FORCE POPULATION

1:40-3:40 P.M., Monday, Williamsburg Room,
Mayflower

(Co-sponsored with Division 1. See Division 1's
program.)

SYMPOSIUM: CLASSIFICATION AND DY- NAMICS IN PSYCHOPATHOLOGY

4:00-6:00 P.M., Monday, Williamsburg Room,
Mayflower

MAURICE LORR, Chairman

Participants: JAMES W. DEGAN, JULES D. HOLZBERG,
RICHARD L. JENKINS.

SCHIZOPHRENIC REACTIONS TO THREAT OF FAILURE

8:40-9:40 A.M., Tuesday, Federal Room, Statler

ELIOT H. RODNICK, Chairman

8:40 A.M. Approach and avoidance behavior of
schizophrenic and normal subjects as a function
of reward and punishment. NORMAN GARMEZY,
Duke University.

A previous paper (*Amer. Psychologist*, July, 1951,
p. 276) compared the ability of schizophrenic and
normal Ss to differentiate among auditory stimuli
(tones) varying along the pitch dimension. Results
indicated that under one experimental condition
(R-P) in which both social rewards ("Right" for

correct responses to a training stimulus) and punish-
ments ("Wrong" for incorrect responses to the most
dissimilar of four generalized stimuli) were used,
schizophrenic patients exhibited a markedly flatter
response gradient than did normal Ss, whereas both
groups performed similarly under another condition
(R only) in which only rewards were operative.
This paper, through a further analysis of the data,
seeks to draw inferences about the possible processes
involved in the obtained differential effects of punish-
ment.

The empirical response gradients for the two con-
ditions were used to derive hypothetical avoidance
gradients for both groups. Under the R-P condition
this hypothetical gradient for the patient group was
markedly flatter relative to the gradient for normal
Ss. Substantiation for this greater and more general-
ized avoidance tendency was secured by an analysis
of the learning curve data. As the learning trials
(under R-P) progressed, the patients manifested in-
creased avoidance behavior to all stimuli, with maxi-
mum avoidance at the training tone. Under the R only
condition, however, rewards which followed correct re-
sponses to the training tone had been equally effective
in facilitating the differentiation of both groups. It
was, therefore, assumed that avoidance of punishment
came to dominate the behavior of the patients, over-
shadowing the previous effectiveness of these social
rewards as incentives for adaptive behavior.

These findings will be discussed in relation to con-
flict theory, Hull's recent formulation of simple qual-
itative discrimination learning, Cameron's concept of
reaction sensitivity and psychoanalytic propositions
about etiological factors in schizophrenia. (Slides)

8:55 A.M. Changes in the visual discrimination be-
havior of schizophrenic subjects as a function of
the thematic content of the stimulus. WILLIAM
L. DUNN, JR., Duke University.

PROBLEM: A study by Garnezy indicated that under
conditions of social reward ("Right" for correct re-
sponse) schizophrenic and normal subjects performed
similarly on a discrimination task. Under conditions
of censure ("Wrong" for incorrect response) the be-
havior of schizophrenics was significantly less ac-
curate than that of normals.

The present study was designed to test the hypo-
thesis that stimuli incorporating thema of social re-
jection of criticism, in contrast with other types of
thema, can also be determinant in inducing the pre-
viously observed tendency toward nondifferentiating
responsivity in schizophrenics.

SUBJECTS: 40 relatively acute schizophrenic and forty nonpsychiatric veteran patients.

PROCEDURE: Three silhouetted scenes posed by a woman and a boy, incorporating thema of (a) verbal censure, (b) physical punishment, (c) feeding, and an impersonal scene of a house and tree, were recorded on 35-mm. slides with five variations of each. These variations, differing by virtue of progressive spatial shifts in some aspect of the figures, were scaled pre-experimentally to yield descending response gradients. Using the method of constant stimuli and brief exposures, each variation and a duplicate of the original were presented six times, paired with the original and following it by two seconds. The Ss responded "Same" or "Different" by means of a lever-operated switch. Measures consisted of the frequency with which the response "Same" was made for each variation.

RESULTS: The schizophrenic group's discrimination behavior on stimuli incorporating the verbal censure thema was significantly poorer than that of normals. However, for each of the other thema, discrimination performance was approximately equivalent to that of normals.

CONCLUSIONS: The results suggest that the tendency toward nondifferentiating responsivity in schizophrenics can be induced by stimuli incorporating thema of social censure but is not induced by the control of stimulus material. These findings emphasize again the relationship between motivational variables and schizophrenic behavior. (Slides)

9:10 A.M. Anxiety as a determinant of differential responsivity to reward and punishment. BENJAMIN BARGER, *Duke University*.

PROBLEM: To explore the hypothesis that as anxiety increases social punishment is more effective in modifying a punished response and social reward is less effective in modifying a rewarded response.

SUBJECTS: 64 college undergraduates; 32 had high scores on an anxiety scale; 32, low. Half of each group received reward; half, punishment.

PROCEDURE: A modified differential threshold visual size discrimination task was used. A series of 82 circles (6 different sizes, systematically randomized) was presented three times to be judged as more like either the larger or smaller of two standard circles. During the first two series no information was given the subject about his performance. During the third, for the "reward" subjects, a signal reading RIGHT lighted for correct responses to two of the three larger test circles. For the "punishment" groups a WRONG signal lighted for wrong responses to the same two circles. Since only "larger" responses were rewarded and only "smaller" responses punished, tendencies to repeat rewarded or avoid repeating punished responses

were reflected in increases in the number of larger judgments under the incentive conditions.

RESULTS AND CONCLUSIONS: The high anxiety groups showed, respectively, a greater increase in "larger" responses under punishment, and a smaller increase under reward than did the two low anxiety groups.

The results support the major hypotheses of the research and reveal, in addition, progressive improvement in discrimination for low anxiety subjects and a progressive decrement for the high. The effectiveness of punishment in inducing modification of a punished response was increased and the effectiveness of reward in modifying a rewarded response was decreased with increased anxiety. The results will be discussed in terms of their meaning for drive theory. (Slides)

9:25 A.M. Conceptual ability of schizophrenics as a function of threat of failure. WARREN W. WEBB, *Duke University*.

Previous investigators have consistently found a deficit in the conceptual ability of schizophrenics. Several observations have suggested that the extent of the deficit may vary (rather than being constant) in relation to such situational factors as rapport, motivation, threat, etc. The widely held view that feelings of personal inadequacy and failure are central to the development of schizophrenia determined the selection of "threat of failure" as a condition worthy of study in relation to extent of the deficit in conceptual ability. It was postulated that deficit in conceptual ability of schizophrenics would be maintained and/or increased under threat of failure.

Similarities tests (two alternate forms) were selected as conceptual tasks. Both experimental ($N=28$) and control ($N=24$) groups were composed of hospitalized schizophrenic patients. The experimental subjects were (a) given a pretest, (b) were then told they had done poorly, and (c) given a posttest. The control Ss were given (a) a pretest, (b) a time-filling Knox Cube Test, and (c) a posttest. The responses to the similarities test items were scored for quality level and were rated for *imprecision* and *tangentiality*. Comparisons of the two groups were made on differences between pretest and posttest scores and ratings.

Under conditions of minimal stress (control group) schizophrenics showed a significant improvement in score (from pretest to posttest). After having experienced threat of failure (experimental group) schizophrenics were not only unable to effect an improvement in score, but, late during the posttest period, showed a significant decrement in score. Ratings of *imprecision* and *tangentiality* showed a trend toward an increase of these qualitative attributes of schizophrenic speech in the responses of the experi-

mental group relative to the responses of the control group.

These findings will be discussed in relation to a motivational frame of reference. (Slides)

SYMPOSIUM: COGNITIVE THEORY AND PERSONALITY FUNCTIONING

9:50-11:50 A.M., Tuesday, Presidential Room, Statler

(Co-sponsored with Division 1.)

MARTIN SCHEERER, Chairman

Participants: DONALD K. ADAMS, ROBERT LEEPER, LEO POSTMAN, and ALEX SWEET.

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room, Mayflower

VICTOR H. NOLL, Chairman

ROUND TABLE: INVESTIGATION OF THE VALIDITY OF SOME HYPOTHESES IN THE INTERPRETATION OF THE H-T-P

1:40-3:40 P.M., Tuesday, Pan-American Room, Statler

ISAAC JOLLES, Chairman

Participants:

EMANUEL F. HAMMER. An investigation of phallic symbolism and depiction of castration feelings on the H-T-P.

FRED BROWN and ELINO GOTTLIEB. Dynamic factors in the relationship between qualitative and quantitative aspects of the H-T-P.

HARRY S. BECK. Vertical and temporal placement of the drawings on the form page.

SELMA LANDISBERG. The H-T-P in differential diagnosis.

ALLEN R. COHEN. Prognostic signs on the H-T-P.

THE CLINICIAN AS A PERSON

2:50-3:50 P.M., Tuesday, Federal Room, Statler

FREDERICK WYATT, Chairman

2:50 P.M. The clinician's personality and his case reports. RICHARD N. FILER, *VA, Detroit, Michigan*. (Sponsor, Robert G. Gibby)

PROBLEM: This study is concerned with two major problems: (a) whether different examiners emphasize different personality dimensions in their case reports

and (b) whether such differences are significantly related to measures of the examiner's personality characteristics.

SUBJECTS AND PROCEDURES: From 156 reports of thirteen male clinicians at the Detroit Mental Hygiene Clinic tabulations were made of references to the following dimensions:

1. Hostility.
2. Hostility turned inward.
3. Passive-dependency.
4. Feelings of inferiority.

On the assumption that an examiner's position on any of these four dimensions was in part an expression of his own needs, certain relationships were hypothesized between the frequencies with which the examiners refer to these dimensions and ratings of the examiner's behavior in terms of ascendancy, depression, and intropunitiveness, extrapunitiveness, and inpunitiveness.

All dimensions were dichotomized and the resultant data arranged into 2×2 contingency tables. Fisher's exact method was used to determine the chance probability of each table. All analyses were significant at the 5% level or less.

RESULTS: 1. Examiners who stress hostility turned inward tend to be rated depressed and intropunitive.

2. Examiners who stress hostility turned inward and either passive-dependency or inferiority tend to be rated submissive.

3. Stress on either inferiority or passive-dependency but not on hostility turned inward is significantly associated with behavioral ratings which place the examiner in the upper half of the distribution of ascendancy.

4. Of those classified most ascendant, examiners who are above the median on references to hostility in their reports are rated also as extrapunitive.

Using a similar procedure, a separate study of references to defense mechanisms revealed that the three most frequently mentioned defense mechanisms in reports are more characteristic of the clinicians than of their patients.

CONCLUSION: In view of the findings it is concluded that there is a significant relationship between the examiner's personality and his case reports.

3:50 P.M. A study of psychotherapists' associations to a patient interview. RAE A. SHIFRIN, *Langley-Porter Clinic*.

This study is an analysis of the responses of six psychoanalytically-oriented psychotherapists to a particular patient seen for the initial therapy interview. The six therapists (advanced students of an institute for psychoanalysis) observed a fifty-minute interview from behind a one-way screen. Recordings of the interview were made. Within twenty-four hours, each

therapist listened to a play-back of the interview recordings through earphones and, simultaneously, gave a running account of his associations by dictating these into a recording instrument. These responses included statements about what the patient was experiencing, inferences about the meaning of the behavior exhibited, and feelings engendered in the therapist by the patient's behavior.

Within ten days of the interview, each participant was interviewed by the investigator to determine the cues which evoked each response and his attitudes regarding the kind of life experiences which enabled him to make each inference. The responses were then coded in terms of their content, cues, and the therapist's attitudes toward the kinds of life experiences which determined them. In addition, a projective analysis of each individual's entire association protocol was made by the investigator in order to determine the manner in which the personality of the therapist determined the quality of the response. These projective analyses were validated through an outside criterion. Because of the small sample, no claims were made for the definitiveness of the conclusions.

The assumptions which were tested stemmed largely from statements in psychoanalytic literature regarding the role of the therapist and his mode of perception in the interview situation. Assumptions regarding psychoanalytically-oriented therapists' more extensive use of nonverbal over verbal cues and their tendency to rely more upon their accumulated personal experience (including personal analysis) rather than upon their formal training and theoretical knowledge were not borne out in this study. The aspects of the experimental situation which might have influenced these results are discussed. It was possible to demonstrate reliable variations in approach which could be attributed to individual differences in personality among the therapists.

3:20 P.M. The personalities of successful and less successful psychotherapists. LESTER B. LUBORSKY, *The Menninger Foundation, Topeka, Kansas.*

PROBLEM: There is a large literature of authoritative opinions on requirements for good psychotherapists (Freud, Alexander, Sachs, Sharpe, Fromm-Reichmann). Do our data confirm these?

SUBJECTS: Of 247 psychiatrists trained at The Menninger School of Psychiatry in the past five years, the top and bottom 13% (33 "highs" and 33 "lows") residents were studied.

PROCEDURE: Evidence concerning personality and work competence of each group was summarized:

1. Vital statistics.
2. Tests given at application for training (Wechsler-Bellevue, Rorschach, Word-Association, Strong VIB).
3. Supervisors' evaluations during 1 to 3 years

training; recorded interviews with 3 to 12 supervisors per man.

4. Colleagues' ratings of competence.

5. Psychotherapy process notes (where available).
RESULTS: (Selected) 1. Lows are significantly older and more often divorced or single.

2. Lows are significantly lower in verbal IQ, especially in Digits, Arithmetic, Similarities. The tests show personality disturbances in both groups but more pervasive ones in Lows.

3. Supervisors describe Highs with considerable agreement, as superior in willingness to learn; intelligence; work habits; judgment; clarity of expression; sensitivity; relationship with patients, supervisors; knowledge and interest in psychiatry; honesty; frankness; maturity; potentiality; independence of judgment; emotional control; normality. Interjudge reliability of competence ratings is high ($r = .8$).

4. Patients like Highs better; less often break off treatment.

5. Psychotherapy notes (scored by Fiedler's "abreaction index") show Highs succeed in creating relationships with more discussion of emotionally laden material.

CONCLUSIONS: Some findings agree with authoritative opinions, some are surprises. About Highs: Emotional control, practicality, judgment are good; impulses are examined carefully before expression. Poorer therapists try to shut off all expressions of impulses, especially hostility. This brittle rigidity can rupture suddenly. Or, oppositely, they are under-controlled: extremely insecure, spontaneous, and impulsive. Highs allow their patients a wider range of life and personality possibilities. They attract respect from most people; most people like them. They learn well, feel free in their job, not bogged down. Personally happier, they have more interests. They are self-developing people.

3:35 P.M. Examiner variance in the Rorschach protocols of neuropsychiatric patients. ROBERT G. GIBBY, DANIEL R. MILLER, and EDWARD L. WALKER, *VA Detroit, and the University of Michigan.*

PROBLEM: Personality characteristics of examiners have been found to be related significantly to Rorschach protocols obtained from normal Ss. This study is concerned with the significance of examiner variance in the Rorschach protocols of neuropsychiatric patients.

SUBJECTS: Criteria for the selection of cases were that they be male, white, well-oriented, and with no diagnosed pathology of the central nervous system. Of the Ss who met these standards, 20 were selected at random for each of 12 examiners at the VA Mental Hygiene Clinic, Detroit, Michigan. The diagnoses of

the final sample of 240 range from simple neurosis to prepsychotic condition.

PROCEDURE: Rorschach tests were administered according to directions contained in the standard texts, and all scored by one individual. To provide for the calculation of reliabilities, a randomly selected sample of records was then scored by a second person. Analyses were made of the variances among examiners for eight scores, *R*, *F*, *FC*, *CF*, *C*, *FY*, *YF*, and *V*. Separate analyses were made of the ratios of the scores to the total number of responses. Therefore *R* is not one of the percentage scores.

RESULTS: (a) The mean reliability of the scoring categories is .91 and the range is .79 to 1.00. (b) Of the absolute scores, the variances among examiners are significant at the 5 per cent level for *F*, *FY*, and *C*. Examiner variances are also significant for three of the percentage scores, *F*, *YF*, and *C*. (c) The ranges of two determinants, *C* and *YF*, are sufficiently small so as to suggest that the results for these categories might be a function of the sample of patients.

CONCLUSIONS: (a) Differences among examiners are significant on six of fifteen scoring categories in records obtained from randomly assigned neuropsychiatric patients. (b) Compared to protocols of non-neuropsychiatric Ss, records of clinical patients seem to vary less as a function of differences among clinicians. This relative lack of responsiveness to the characteristics of the examiner is interpreted as a tendency on the part of pathological Ss to relate to others in the same manner regardless of the situation.

ROUND TABLE: PROFESSIONAL PROBLEMS IN PRIVATE PRACTICE

4:00-6:00 P.M., Tuesday, Federal Room, Statler

LAWRENCE E. ABT, Chairman

Participants: HARRY BONE, JOHN DOLLARD, ALBERT ELLIS, CHAS. B. FLORY, R. J. WENTWORTH-ROHR.

ROUND TABLE: PERSONALITY COUNSELING OF THE MENTALLY RETARDED, AND COUNSELING OF THEIR PARENTS

4:00-6:00 P.M., Tuesday, Presidential Room, Statler

(Co-sponsored with Divisions 16 and 17 and the Office of Vocational Rehabilitation, Federal Security Agency.)

SALVATORE G. DiMICHAEL, Chairman

Participants:

THEODORA M. ABEL. The role of therapy as a prerequisite or adjunct to counseling.

FREDERICK C. THORNE. The role of personality counseling in a community placement program for mental defectives.

EDGAR A. DOLL. New horizons in mental retardation.

SEYMOUR B. SARASON. Psychotherapy with parents of retarded children.

PRESIDENTIAL ADDRESS

8:00 P.M., Tuesday, Ballroom, Mayflower

SAMUEL J. BECK. The Science of Personality: Nomothetic or Idiographic?

SYMPOSIUM: RESEARCH IN COMMUNITY MENTAL HEALTH SCREENING

8:40-10:40 A.M., Wednesday, Congressional Room, Statler

JERRY W. CARTER, JR., Chairman

Participants:

LOUIS L. MCQUITT. An exploratory research in mass screening for mental illness.

IRVING D. LORGE. Somatic and psychiatric aspects of the medical status of a representative community.

JOHN E. ANDERSON. Nobles County every-child survey.

ROUND TABLE: PSYCHOTHERAPY IN A STUDENT COUNSELING SERVICE

9:50-11:50 A.M., Wednesday, Presidential Room, Statler

(Co-sponsored with Division 17.)

LAWRENCE I. O'KELLY, Chairman

Participants:

W. M. GILBERT. Should intensive psychotherapy be provided in a university counseling service?

THOMAS N. EWING. The necessary integration of counseling and psychotherapy.

LEO A. HELLMER. Ethical problems involved in providing psychotherapy.

ALICE K. JONITZ. The avoidance of cultism in therapy.

PRODROMAL AND PROGNOSTIC INDICATORS

11:00-12:15 P.M., Wednesday, Congressional Room, Statler

DAVID WECHSLER, Chairman

11:00 A.M. A study of duration of illness as a prognostic indicator in mental disease. CLIFFORD H. SWENSEN, JR., *University of Pittsburgh*.

It has been customary for psychiatrists to assume that longstanding cases of mental illness have less chance for recovery than cases of comparatively short duration. Many statistical studies have tended to corroborate this point of view. It was the purpose of this study to test the hypothesis that cases of short duration have better chance for recovery than cases of long duration, when other factors that are significantly related to the outcome of mental illness (such as marital status, treatment, etc.) had been controlled.

The population used in this study were all cases admitted to Western Psychiatric Institute and Clinic between 1942 and 1950, excepting cases with organic involvement of some sort. There were 486 cases meeting this criterion.

The relationship between 21 variables and outcome of illness was determined. Outcome was categorized as "improved" or "unimproved" as of one year after the patient's discharge from the hospital.

Eleven of these variables, including duration of illness, were found to be significantly related to outcome.

The sample of 486 cases was then split into two groups, an "improved" group and an "unimproved" group. Cases were dropped from each of the two groups until there were no significant differences between them on any of the variables significantly related to outcome other than duration of illness. When this matching procedure had been completed there were 94 cases in each group, or a total sample of 188. The difference between the two groups on duration of illness was then measured. It was found that there were no significant differences between the two groups on duration of illness.

The results of this study seem to imply that duration of mental illness in and of itself is not of prognostic importance. The prognostic value of duration of illness apparently derives from its correlation with other variables.

11:15 A.M. The relationship of certain personality factors to prognosis in psychotherapy. SELIG ROSENBERG, *Brooklyn VA Regional Office*.

The purpose of this study was to determine, first, whether certain personality factors of pretreatment psychoneurotics were associated with their subsequent improvement or lack of improvement in psychotherapy; and second, how effectively any significant factors which were found could predict the course of psychotherapy.

The subjects for the study were a group of forty white, male, psychoneurotic war veterans, aged 25-35, all of whom had undergone pretreatment psychological testing. Half of this group was definitely improved

and the other half definitely unimproved after nine months of individual psychotherapy.

Two judges independently utilized pretreatment psychological test protocols of one half of the subjects to rate 23 personality factors. The significant findings indicated that, as compared with the unimproved cases, the improved cases had higher Wechsler-Bellevue IQ scores, greater productivity, less rigidity, a greater range of interests, greater emotional depth, more sensitivity, a higher energy level, and less concern with bodily symptoms.

Using these factors as prognostic guides the judges were able to make significantly better than chance predictions of improvement and unimprovement in the second half of the subjects from an analysis of their pretreatment psychological tests.

The results established the basic hypothesis that certain personality factors are definitely associated with progress in psychotherapy with neurotics and that it is possible to make accurate prognostic statements if these factors are utilized as a guide. It was also concluded that a general underlying personality factor associated with a favorable prognosis is the greater ability and desire of the patient for emotional participation in therapy.

11:30 A.M. An investigation of factors predictive of posthospital adjustments of schizophrenics. WILLIAM SCHOFIELD, STARKE R. HATHAWAY, DONALD W. HASTINGS, and DOROTHY M. BELL, *University of Minnesota*.

PROBLEM: To determine those descriptive characteristics, history items, and details of mental status and presenting illness which differentiate schizophrenics having good posthospital courses from those with subsequent adjustment.

SUBJECTS: Basic data were accumulated by a social worker specialized in research. She traveled throughout Minnesota to establish contact with patients who had been hospitalized on the psychiatric service of the University of Minnesota Hospitals between 1938 and 1944. This period was chosen since it encompassed the operation of the psychiatric service from its inception in 1938 to the beginning of the period of extensive utilization of electric and insulin convulsive therapies. The social worker succeeded in establishing contact with the patient directly, or with close relatives or well informed agencies, in 77% (1,261) of the total of 1,638 cases treated during the 1938-44 interval. On the basis of interviews, the social worker assigned a rating to each patient to indicate the degree of difficulty he had experienced in his over-all adjustment subsequent to his hospitalization. A five-step rating scale was used, with each step carefully defined.

PROCEDURE: Schizophrenic patients contacted in the

follow-up study who fell into the four extreme categories of rated posthospital adjustment constituted the criterion groups in a search for prognostic factors. These groups were composed respectively of 59 schizophrenics who had no further difficulty of the type for which they were hospitalized or were making a good social adjustment, and 119 schizophrenics who had spent over 50% of the time since their University hospitalization in a state institution or had experienced continuous difficulty necessitating their being cared for by their families. Case histories and hospital records of these patients were examined in detail for data covering 250 items in the personal and medical histories, mental status, and presenting illness at time of hospitalization of the patients, together with personal data (e.g. sex, age) and psychometric data. Comparisons were made of frequency of occurrence of different items in the groups with "good" and "bad" posthospital courses.

RESULTS: Of the large number of items studied, very, very few were found to show even promising relationship to posthospital course. Implications of the study are discussed. (Slides)

11:45 A.M. Certain personality characteristics of potential hypertensives. L. G. CARPENTER, JR., R. E. HARRIS, M. B. FREEDMAN, M. SOKOLOV, and S. P. HUNT, *University of California School of Medicine*. (Sponsor, L. G. Carpenter)

PROBLEM: To investigate personality functioning in persons with abnormal vascular responses associated with the later development of essential hypertension. **SUBJECTS:** 39 college women whose current blood pressure patterns provide an actuarial prediction of greater incidence of essential hypertension in later life than in 39 matched controls.

PROCEDURE: Psychodramatic methods were chosen because: (a) They are necessarily interpersonal, can be made stressful, and for most subjects are immediately ego-involving. (b) Plots may be constructed which epitomize those life situations which by psychodynamic theory are thought to be critical for the development of essential hypertension. (c) Observations of nonverbal as well as verbal communicative and expressive behavior may be recorded. Two dramatic situations were staged in which the Ss experienced frustration, rejection, criticism, and hostility from an authoritarian person who was played by a staff member.

A battery of projective and objective tests was administered before and after the psychodramas. On the basis of an interview, the psychiatrist attempted to identify which subjects were prehypertensive from his knowledge of the presumed psychodynamics of essential hypertension in clinical patients.

Most of the procedures, including the psychiatric interview, showed significant differences between the groups. The potential hypertensives were relatively less able to solve the assigned problems of the psychodramas and were less efficient in the use of their intellectual and emotional resources. This took the form of conflict over the expression or inhibition of emotion, hostility unintegrated with problem solving, and a self-concept which restricted dependable understanding of the motives of others.

CONCLUSIONS: 1. Microcosmic situations can be designed which will efficiently instigate specific affects comparable to life experiences and yield data on personality functioning which can be dependably recorded.

2. Differential response of normal controls and potential hypertensives validated critical hypotheses about psychodynamic antecedents of essential hypertension.

12:00 M. Development and evaluation of a behavioral scale for appraising the adjustment of hospitalized patients. PAUL McREYNOLDS, EDGERTON BALLACHEY, and JAMES T. FERGUSON. *VA Hospital, Palo Alto, California*.

PROBLEM: To develop a practical, reliable, and valid method for obtaining behavioral data on hospitalized psychiatric patients, and for scoring these data in such a way as to provide a measure of "hospital adjustment."

SUBJECTS: Various groups of Ss have been used in different phases of the study, including in all over 800 patients from a VA hospital, three California State hospitals, one California State clinic, and two military hospitals.

PROCEDURE: A large number of statements describing the behavior of psychiatric patients was obtained by interviewing psychiatric aides. Each of these statements was judged by 17 professional judges as to implied hospital adjustment. Items judged unreliable were eliminated. Remaining items (250) were checked for rating reliability by having them checked independently by two aides on 63 patients. Unreliable items were eliminated, leaving 160. These items were answered for different criterion groups of patients in various hospitals. The general procedure was to have the items checked by psychiatric aides. On the basis of internal consistency tests further items have been eliminated.

RESULTS: The present form of the Scale (termed Hospital Adjustment Scale) consists of 91 behavioral descriptions of patients. These are checked as True or Not True for a given patient by the psychiatric aide. This typically requires 10-15 minutes. On the basis of the answers the Scale is scored. It yields a Total

Score and three Subscores. Validity data indicate that the Scale is useful in evaluating the status and movement of patients, and that it has utility in clinical practices and in providing research criteria.

CLINICAL AND RESEARCH IMPLICATIONS OF THE MMPI

1:40-2:40 P.M., Wednesday, Federal Room, Statler

STARKE R. HATHAWAY, Chairman

1:40 P.M. The Minnesota Multiphasic Personality Inventory and stuttering phenomena in young adults. W. GRANT DAHLSTROM, and DOROTHY DRAKESMITH CRAVEN, *State University of Iowa and Walter Reed Hospital*. (Sponsor, W. Grant Dahlstrom)

PROBLEM: A study of the role of personality variables in the stuttering patterns of young adults.

SUBJECTS: 80 male and 20 female stutterers in the SUI Speech Clinic.

CONTROL GROUPS: 618 Minnesota MMPI Normals, 1,763 Minnesota Psychiatric cases (Hathaway), 100 SUI Freshmen, 3,996 University of Wisconsin Counselees (Drake).

PROCEDURE: Speech status was evaluated by the Ammons-Johnson Test of Attitude towards Stuttering (including a self-rating of stuttering severity), a clinician's rating of stuttering severity, paragraph readings, and a checklist of stuttering mannerisms. The MMPI was used to evaluate adjustment status.

RESULTS: The stuttering group showed a high degree of heterogeneity in the measured adjustment patterns. Chi-square tests of the similarity of the distributions of MMPI high points yielded highly significant differences between the stuttering group and the Minnesota Normals, Minnesota Psychiatric, and SUI Freshmen groups. A nonsignificant chi square ($.10 < p > .05$) was obtained in comparison with the UW Counselees. Intercorrelations of the criterion measures showed positive relationships amongst the various stuttering evaluations, except for the Attitude variable. No clinically useful relationships were found between these indices of stuttering severity and the MMPI variables, the Iowa Manifest Anxiety Scale, and the Welch Anxiety Index.

CONCLUSIONS: As a group, these stutterers differ from midwestern normals and typical college students in their adjustment patterns. They are not as severely maladjusted as general psychiatric cases and most closely resemble other college students with problems. Although the obtained differences could support the hypothesis that adjustment difficulties are etiological in stuttering phenomena, two important findings are not in line with this theory: the heterogeneity in ad-

justment patterns, and the lack of consistent relationships between the personality variables and stuttering severity and pattern. Preliminary findings suggest, however, that these measurable personality differences between stutterers may be related to differences in motivation for therapy and degree of improvement. (Slides)

1:55 P.M. Reliability of MMPI scales. ALBERT ROSEN, *VA Hospital, Minneapolis, Minnesota*.

PROBLEM: To study the stability of MMPI scale scores over a brief test-retest interval.

SUBJECTS: 40 male patients admitted to the psychiatric section of a veterans hospital.

PROCEDURE: Every new patient admitted over a two-month period who was testable was given the MMPI shortly after admission and again within one week of the first test. Mean number of days between test and retest was 4.1. Between time of admission and date of first test, 3.6 mean days elapsed. There was a mean interval of 7.7 days between time of admission and administration of the second test.

Correlation coefficients and significance tests were calculated for 13 scales, including *L*, *F*, *K*, the 9 original personality scales and the *Si* scale. Comparisons were made with other studies.

RESULTS: Reliability coefficients range from .55 to .88 with a mean of .77. Five correlations are between .86 and .88. These coefficients are higher than those reported by the test authors and others in the literature, although there is no other study on psychiatric patients with a brief test-retest interval for the whole group.

Two scales, *K* and *Pa*, show significant mean differences from test to retest, and shed interesting light on changes in the defensive structure of patients with brief hospitalization.

CONCLUSIONS: The MMPI scales in general demonstrate a high degree of reliability. When the reliability of each scale is known, the significance of change in a patient's score on any scale over a period of time in therapy can be more adequately evaluated. The misleading nature of split-half reliability coefficients and other approaches current in the fields of intelligence and achievement testing is emphasized when dealing with inhomogeneous scales which are not constructed with the goal of obtaining internal consistency. (Slides)

2:10 P.M. A factor study of the MMPI using scales with item overlap eliminated. GEORGE S. WELSH, *VA Hospital, Oakland, California*.

A number of factor analytic studies of the MMPI using the standard clinical scales have been reported. It has been pointed out by Guilford that the inter-

pretations and the meaningfulness of such studies must be somewhat ambiguous since there is considerable item overlap between the scales.

The MMPI records of 150 male VA hospital patients were scored using the clinical scales with all item overlap eliminated. These scores were then inter-correlated and the resulting matrix subjected to a centroid factor analysis.

Two factors emerge and account for most of the variance in the shortened scales except $M\alpha'$ and Pa' . The first factor has its highest positive loadings on P' and Sc' and highest negative loading on K' . A practical method of measuring this factor has been developed and an interpretation advanced relating it to introversive personality traits. The second factor has its highest positive loading on $M\alpha'$ and highest negative loading on D' , K' , and Hy' . An interpretation of this factor relating it to expressive-repressive personality traits is offered. (Slides)

2:25 P.M. A factor-analytic study of the Minnesota Multiphasic Personality Inventory using a transpose matrix (Q-technique). HAROLD BORKO, *University of Southern California*.

PROBLEM: In all previous factor-analytical studies of the MMPI, the various scale scores were the variables analyzed. The derived factors have been interpreted in terms of syndromes of traits such as general neurotic and psychotic tendencies. In this investigation, the MMPI is studied by means of the transpose (Q) factor-analysis technique in order to determine what personality variables, as distinct from diagnostic syndromes, are being measured by the test. **SUBJECTS:** 34 male patients from the VA Neuropsychiatric Hospital in Los Angeles, California. These patients were selected as being relatively clear-cut examples of various diagnostic categories. In addition, a thirty-fifth "case" was included. This "case" is not a real person, but is the keyed or "normal" way of classifying the statements.

PROCEDURE: Modified tetrachoric correlation coefficients were computed among all individuals, based upon the way they responded to the MMPI items. Fourteen factors were extracted and rotated orthogonally. The factors were then interpreted using profile-analysis techniques, and the resulting trait names were checked and validated with the patient's clinical records.

RESULTS: Twelve of the fourteen factors were interpreted and the following names assigned to them: (1) strength of ego defenses, (2) test-taking attitude, (3) impulsivity, (4) anxiety, (5) self-assertion, (6) hypomania, (7) introversion, (8) dependency, (9) autistic and paranoid tendencies, (10) depression,

(11) general emotionality, (12) obsessional rumination.

CONCLUSIONS: The present study helps establish the fact that the test measures various personality traits and that profile-analysis techniques will enable one to give a dynamic personality description of the subject as well as to make a diagnosis.

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room,
Mayflower

ROUND TABLE: GROUP SUPERVISION IN PSYCHOTHERAPY TRAINING

1:40-3:40 P.M., Wednesday, South American Room,
Statler

GORDON F. DERNER, Chairman

Participants: PAUL E. EISERER, LEON GORLOW,
NATHAN WILLIAM GLASER, MARTIN E. JACOBS,
EMANUEL K. SCHWARTZ, ROBERT B. THORNE,
DON TOMBLEN.

RIGIDITY AND PERSEVERATION

2:50-3:50 P.M., Wednesday, Federal Room, Statler

LAURANCE F. SHAFFER, Chairman

2:50 P.M. A comparison of rigidity in normal and psychiatric subjects. LEONARD HORWITZ, *Winter VA Hospital*.

PROBLEM: To investigate the factors which underlie the major rigidity tests and to compare a normal and psychiatric population for rigidity factors. Previous factorial studies have failed to include some of the leading rigidity tests and none has attempted to compare the two groups.

SUBJECTS: 50 hospitalized psychiatric patients in a veterans hospital and fifty normal veterans were used. The groups were matched for age, intelligence, and education. The normals were screened for abnormal symptoms in their medical and military history and in the Cornell Index.

PROCEDURE: Both groups were given a test battery consisting of the following: the *Einstellung* problems, Cattell's motor perseveration tests, the Level of Aspiration technique, reversible figure oscillations, Lewin's cosatiation test, and an abbreviated Wechsler-Bellevue. A factor analysis, using Thurstone's complete centroid method rotated to simple structure, was performed.

RESULTS: The patient group showed a heavily saturated, generalized rigidity factor which was mainly associated with low intelligence, and was loaded with all of the tests except cosatiation. The normals did not evidence a broad grouping of this type but showed factors similar to what Cattell has called disposition rigidity and "low energy." The latter factor was shown to be a trend toward plodding, repetitious work associated with the constricting effect of anxiety. The normals also showed rigidity factors of low motor speed and high effort.

CONCLUSION: The results show that rigidity in a psychiatric population is largely related to intelligence while rigidity in normals is associated with other more specific factors. This finding may be attributed to the fact that the psychiatric patient is able to overcome some of the rigidity which accompanies his illness by falling back upon the intellectual abilities still at his disposal.

3:05 P.M. The disparity between phenomena reportedly related to rigidity. JACK TRAVIS HUBER, *Teachers College, Columbia University*. (Sponsor, Laurance F. Shaffer)

Various psychological phenomena have been reportedly related to "rigidity." This research attempted to demonstrate that perseveration, concrete thinking (verbal and nonverbal), and attitude crystallization are not significantly related; thus, a generalized factor "rigidity" including these phenomena cannot be postulated. Specific questions: (a) Which of these three aspects of personality are related significantly? (b) What accounts for the relationship? (c) What may be concluded about rigidity? (d) What may be concluded about perseveration, concrete thinking, and attitude crystallization?

Subjects were 60 white male mental patients, age 20 to 35 years, 87 to 131 full scale IQ's, W-B Scales.

Subjects tested individually in two sessions, two weeks apart. First session: specially designed vocabulary test for verbal concrete thinking; Holsopple Test (Beier Revision) for nonverbal concrete thinking; four Cattell Perseveration Tests; two Thurstone Attitude Scales, Forms A. Second session: Holsopple Test repeated for reliability measure; Forms B of the Attitude Scales. Test reliability estimates were high.

FINDINGS: (1) Significant correlations were found between perseveration and verbal concrete thinking and between measures of concrete thinking (verbal and nonverbal). (2) Correlations between IQ and (a) perseveration, (b) verbal concrete thinking, (c) nonverbal concrete thinking were appreciable. When IQ was partialled out from intercorrelations of all variables, no correlations were significantly different from zero. Thus, part of what is called "rigidity," or

concrete thinking or perseveration, may relate to lower intellectual functioning. (3) A general concept of rigidity cannot be postulated from relationships found between measures of perseveration, concrete thinking, attitude crystallization. (4) Perseveration, concrete thinking, and attitude crystallization appear to be discrete concepts, not to be confused with rigidity. The concept of concrete thinking needs further clarification. Attitude crystallization requires further clarification if "rigidity" centers in the area of attitudes, as suggested by this research.

3:20 P.M. Changes in behavior variability with psychotherapy. JEAN M. G. ROSHAL, *Washington, D. C.*

PROBLEM: The basic premise is that behavior variability is an aspect of, and a contribution to, adaptability. Deficiencies in adaptability should, then, be evidenced in behavior as restricted variability. Further, if there is a change from less adaptability (maladjustment) to greater adaptability (improved adjustment) through psychotherapy, there should be an attendant increase in variability.

SUBJECTS: 42 students counseled by the nondirective method at the Psychological Clinic of The Pennsylvania State College.

PROCEDURE: Mean Type-Token Ratios (MTTR) were computed from each client's statements in both the initial and final interviews of the treatment series. The MTTR was computed using both 100 word and 200 word segments. Improvement in psychotherapy was estimated by a composite score, based on changes from negative to positive feelings and three rating scales completed at the end of therapy. Changes in MTTR for a "more successful" group were compared with the changes for a "less successful" group.

RESULTS: The "more successful" group showed a higher mean gain in MTTR than the "less successful" group for both 100 and 200 word samples. The null hypothesis could be rejected at an acceptable level of confidence, however, only for the Ratio computed from 200 word segments.

CONCLUSION: The study supports the hypothesis that variability is an aspect of adaptability through supporting the hypothesis that persons who profit from psychotherapy will increase in variability. (Slides)

3:35 P.M. Perseveration in schizophrenics, organics, and lobotomized patients. MURRAY KRIM, *New York University*.

PROBLEM: Perseveration, described as characteristic of schizophrenics and organics, is investigated to determine whether schizophrenic perseveration differs from that of organic perseveration.

SUBJECTS: 148 male Ss, divided into 32 severely im-

paired schizophrenics, 32 less severely impaired schizophrenics, 32 lobotomized schizophrenics, 32 organics, 20 normals. The groups were equated on age and education.

PROCEDURE: Test I consisted of 4 sets of pictures of common objects, 25 pictures to a set. Each set was tachistoscopically presented, each *S* being asked to name each picture. Four durations of exposure were used, rotated for each set. Test II consisted of 4 sets of ambiguous pictures of the Harrower-Rubin vase type. Following Werner, each perseveration on Experiment I was classified according to the following categories: simple, repetitive, and delayed perseverations. In addition, the following categories were added by the author: perseverations that were a close approximation to the stimulus, and perseverations that were far from the objective character of the stimulus; perseverations that had previously been correct responses, and perseverations that had not previously been correct responses. In Experiment II, the analysis was in terms of perseverations, correct responses, "don't know" responses, and "other" responses.

FINDINGS: In general, the normals differed significantly from the combined pathological groups. The pathological groups did not differ significantly among themselves with respect to simple, delayed, and repetitive perseverations. Organics showed significantly more perseverations that had previously been correct responses. Schizophrenics (Experiment II) showed significantly more perseverations. Results discussed in terms of various theories of perseveration.

MEETING OF INCOMING EXECUTIVE COMMITTEE

7:00 P.M., Wednesday, Jefferson Room, Mayflower

THE BODY IMAGE

8:40-9:40 A.M., Thursday, Federal Room, Statler

ISABELLE V. KENDIG, Chairman

8:40 A.M. Body image fantasies of patients with rheumatoid arthritis. SEYMOUR FISHER and SIDNEY E. CLEVELAND, VA Hospital, Houston, Texas.

PROBLEM: To determine whether there are any body image fantasies particularly characteristic of rheumatoid arthritis.

SUBJECTS: 20 male rheumatoid arthritis and a control group of twenty males with low back pain.

PROCEDURE: Each patient was given an intensive depth interview and a battery of projective tests including the Rorschach, Draw-a-Person, and an especially modified TAT.

RESULTS AND CONCLUSIONS: For each case in both experimental and control groups two judges evaluated the combined interview and test material. An analysis was made of each patient's conscious ideas about his body, his unconscious fantasies concerning the structure (geography) of his body, and of his special body attitudes growing out of his physical symptoms.

The following attitudes and fantasies were found characteristic of the arthritic group as contrasted to the subjects with low back pain. Arthritic patients unconsciously think of their own bodies literally as a hollow container filled with a soft substance and covered with a hard, impenetrable surface. This body scheme is related to internal "bad" and uncontrolled wishes which the patient feels he must conceal and control by a rigid exterior. A feeling of inconsistency, of two simultaneously opposing qualities, characterizes the arthritic's body image.

Unconsciously, the arthritic as opposed to low back pain patients, has an intense desire to display his body to people. Covertly, a large value is placed on the act of looking at the bodies of others and having one's own body seen by others. This value is so important because the arthritic's defenses are directly or symbolically oriented about the body. Overtly, however, they deny these exhibitionistic impulses and can gain indirect gratification only through attention paid their arthritic symptoms.

8:55 A.M. An investigation of some personality factors in women with rheumatoid arthritis. HAROLD KLEHR, U. S. Naval Hospital, Great Lakes, Illinois.

PROBLEM: To investigate, by the use of psychological test techniques, the tenability of the hypotheses concerning the personality factors in females with rheumatoid arthritis as proposed by A. Johnson, L. Shapiro, and F. Alexander. Utilizing psychoanalytic observations and detailed anamnesis, they reported: (a) that all female rheumatoid arthritis have chronic inhibited aggressive feelings (particularly of an oral nature) which are defended against by (b) a masculine protest reaction (rejection of feminine functions, desire to dominate, and bisexuality) and (c) the assumption of a masochistic role emphasizing service or duty to others.

SUBJECTS: (a) 20 women, rheumatoid arthritis from an outpatient clinic. (b) 20 women from an outpatient clinic population having various illnesses but no muscle or bone involvement. (c) 20 women, "normals" in apparent good health. The *Ss* were controlled for age, education, intelligence level, marital and maternal status.

PROCEDURE: Responses from 15 TAT cards, the Allport-Vernon Study of Values and the Blacky Test

were evaluated for the presence of the personality factors postulated.

1. In the TAT, themes, intensity and direction of aggressivity, domination, and masochism were evaluated.

2. Political and Social scores from the Allport-Vernon were utilized as relating to the defense of domination and masochism.

3. Selected aspects (six sections) of the Blacky Test pertinent to the test of the hypotheses were evaluated.

Analysis of variance and chi-square techniques were used.

RESULTS: There were no statistically significant differences among the three groups on any of the measures employed except for greater oral aggression for arthritics on one of the Blacky Test measures. The findings from the test data do not substantiate the observations presented by Johnson, Shapiro, and Alexander. The fact that all factors postulated by these investigators were present to some degree in all three groups indicates the need for more adequate controls in investigations of this nature.

9:10 A.M. Style of sexual adjustment in disturbed women and its expression in figure drawing.
RHODA LEE FISHER and SEYMOUR FISHER,
Baylor Medical College and Houston VA Hospital.

PROBLEM: To determine the relationship of degree of femininity expressed by female psychiatric patients in figure drawings to the following: (a) Past overt conformance to the "feminine role"; (b) Past subjective enjoyment of sexual intercourse; (c) Range of past heterosexual experience; (d) Severity of past gynecological difficulties (e.g., menstrual); (e) Degree to which bizarre sexual behavior or preoccupation manifested with the onset of severe personality disorganization.

SUBJECTS: 67 female psychiatric patients: 51 schizophrenics; 11 neurotics; 5 manic-depressives. Median age, 31 years.

PROCEDURE: Ninety-two female patients each drew a figure of a woman. Two raters, individually and on a "blind" basis, rated the drawings on a four-point "degree of femininity" scale. The raters manifested sufficiently high reliability in their judgments. Each patient's history was examined for facts regarding past sexual behavior, e.g., reactions to intercourse and early sexual experiences. Using these data two judges jointly rated each S's sexual adjustment on seven different continua. Where the judges could not reach easy rating agreement, the given case was dropped. Finally, the figure drawing and clinical data were related.

CONCLUSION: 1. The Ss drawing moderately feminine figures obtained more (statistically significant) subjective satisfaction from sexual intercourse than Ss drawing figures of low or extremely high femininity.

2. The Ss drawing moderately or highly feminine figures have had a greater number (statistically significant) of gynecological difficulties than Ss drawing low femininity figures.

3. Patients drawing moderately or highly feminine figures manifest less (statistically significant) bizarre sexual behavior or preoccupation in their symptomatology than do Ss drawing low femininity figures.

4. Degree of figure drawing femininity is not significantly related to past conformance to a "conventional" feminine role.

9:25 A.M. An investigation of the effectiveness of human figure drawings as a clinical instrument for describing personality. LILLIAN JAGODA FISHER, *New York University and Northside Center for Child Development, New York City.*

PROBLEM: To evaluate the efficacy of Human Figure Drawings as a clinical instrument for describing personality.

SUBJECTS: 5 Negro children, ages 11 to 14, who had had 40 hours of psychiatric treatment prior to the time of the study.

PROCEDURE: The research method used was an adaptation of Stephenson's Q-technique. A trait-universe of eighty personality variables was randomly selected from 400 such variables abstracted from texts concerned with the projective use of figure drawings. Three groups of independent judges, each group having four members and each group using a different source of clinical data, were required to describe the five Ss in terms of the trait-universe and in accordance with an imposed statistical distribution. In this way there were twelve personality descriptions obtained for each S: four descriptions based on Human Figure Drawings only; four descriptions based on a test battery consisting of the Stanford-Binet, Rorschach, and Thematic Apperception Tests; and four descriptions made by a group of psychiatrists on the basis of actual behavioral data including case history and therapeutic interview material. These descriptions were subjected to correlational and trait analyses, with the psychiatric judgments used as a limiting criterion and the test battery judgments as a comparative criterion.

RESULTS: Correlational analysis revealed significant agreement at the 1% level of confidence between personality descriptions inferred from the Human Figure Drawings alone and those inferred from other sources of clinical data. Further, it was found that personality descriptions inferred from the Human Figure Draw-

ings were significantly interrelated at the 1% level of confidence. However, whereas personality descriptions based on drawings were only "slightly" related to those based on actual behavioral data, test battery judgments were "markedly" related to those based on actual behavioral data. The trait analysis indicated that the largest number of personality variables for which drawings provided descriptions consistent with those obtained from other sources of data are in the areas of: "self-concept"; "values"; and "interpersonal relationships." With respect to the psychiatric criterion, drawings were more "effective" than the test battery in the areas of: "sexual thought and behavior"; "interpersonal relationships"; and "frustrations, conflicts, and fears." Some of the implications of those findings are discussed.

GENERAL PROBLEMS IN PSYCHOPATHOLOGY I

9:50-10:50 A.M., Thursday, Ballroom, Mayflower

HEDDA BOLGAR, Chairman

9:50 A.M. Personality and paralysis. CHARLYNE T. STORMENT-SEYMOUR, ERNEST BORS, F. HAROLD GEIDT, HERBERT GOLDENBERG, and RICHARD LAUX, *VA Hospital, Long Beach, California.*

PROBLEM: Since World War II striking medical and surgical advances have been made in treating patients with paralysis due to spinal cord injuries. However, comparatively little is known about psychological factors involved in such injuries. This is a pilot study of relationships between degree of physical incapacity and quality of personal and social adjustments of quadriplegic and paraplegic veterans.

SUBJECTS: Two matched groups of male veterans, ten paraplegics, ten quadriplegics.

PROCEDURE: Social and personal adjustment measures obtained from two rating scales designed for this study:

1. Each patient independently rated by ward personnel. Summed ratings provided "social adjustment" scores for each patient.

2. Patients independently rated on "personal adjustment" scale by staff psychologists. Judgments based on Rorschach test data.

Group differences on both scale scores compared by *t* technique.

3. Personal and social adjustment ratings of all cases compared by rank-difference correlation method. **RESULTS:** 1. Group differences significant at .01 level found on social adjustment scale. Quadriplegics received consistently higher ratings.

2. Personal adjustment scores showed no significant differences between groups. However, differences ob-

tained were in direction compatible with social adjustment scores. Suggests larger *N* may yield significant differences in this area.

3. Personal and social adjustment ratings show a high correlation, reliable at better than the .01 level. **CONCLUSIONS:** 1. The greater the patients' physical incapacity, the better their social adjustment appears to be.

2. This suggests that paraplegics retain many drives, needs, and motivations which can only partially be fulfilled. Resultant frustrations lead to poor personal and social adjustment.

3. Quadriplegics are no longer as concerned with aspirations and responsibilities of our competitive society, also fewer demands may be made on them because of their greater incapacity. They are, therefore, less apt to be subjected to frustrating situations.

4. Reaction of the completely incapacitated may be similar to the "catastrophic reaction" of the brain damaged individual as described by Kurt Goldstein.

10:05 A.M. The attitudes of the mothers of male schizophrenics toward child behavior. JOSEPH C. MARK, *New York University, School of Education, and Bronx VA Hospital.*

The purpose of the investigation was to determine if the attitudes of the mothers of schizophrenics differ from the attitudes of the mothers of nonschizophrenics.

The results are based on an attitude survey pertaining to child rearing and child behavior. This attitude survey contains 139 items and is of a "disguised-structured" type. The items are worded in the form of stereotypes ("A child should be seen and not heard.") The intent of the items is thus disguised, allowing for projection of opinion. The test is structured in that it provides an objective basis for scoring. Responses by Ss are recorded on a four-point scale: strongly agree, mildly agree, mildly disagree, strongly disagree.

This attitude survey was administered to 100 mothers of male schizophrenics and to 100 mothers of male nonschizophrenics. The two groups were equated with respect to age, religion, education, and socioeconomic status.

Chi-square tests were applied to contingency tables which related the response to each item with group membership. Sixty-seven of the 139 items led to significantly different response distributions at the .05 level or better. Thus, the mothers of male schizophrenics differed significantly in their attitudes toward child behavior from the attitudes of the mothers of male nonschizophrenics.

Four judges then grouped the significant items into clusters suggested by the Fels study on parent-child

relations. The mothers of schizophrenics were found to be mainly restrictive in their attitudes regarding the control of the child. Both attitudes of excessive devotion, on the one hand, and of cool detachment, on the other, characterized the significant items with regard to the warmth of the relationship.

10:20 A.M. The alarm reaction and the general homeostatic syndrome (the adaptation syndrome of Selye) in psychopathological and psychosomatic relationships. G. K. YACORZYNSKI, *Northwestern University Medical School*.

The alarm reaction and the general homeostatic syndrome (the adaptation syndrome of Selye) shows how organic pathology can be produced by stresses of any nature including symbolic threats to the organism. The pituitary-adrenal-cortical system is responsible for these changes. Psychopathological manifestations parallel very closely the organic pathology. This is shown to be true for the final appearance of neurosis and psychosis, for traumatic neurosis, for precipitating events in the neurosis and psychosis, and for experimental neurosis. The emotions of excitement and depression as well as the relationships between body types and organic pathology and psychopathology fit into the hypothesis which is advanced. Furthermore, psychotherapy consists of alleviating anxiety and thus minimizing the biochemical and structural changes which can occur to stress. Shock therapies of various sorts, on the other hand, activate the pituitary-adrenal-cortical systems directly.

Thus symbolic threats to the organism acting through the higher cortical centers, then through the hypothalamus, and finally activating the pituitary-adrenal-cortical systems would account not only for organic pathology but for psychopathological states. This conception implies that all behavioral manifestations in the psychoses and neuroses have an underlying biochemical and/or structural change. A further implication of the hypothesis is that mental breakdowns do not primarily take place to environmental stresses, but to the biochemical and structural changes which occur within the body as a result of the stresses. Thus, psychopathology is not primarily due to unsatisfactory environmental conditions. It is primarily due to the internal changes which these unsatisfactory environmental conditions have produced. The chain of events would consist of symbolic threats which produce biochemical and structural changes. These internal changes in turn are responsible for psychopathology. (Slides)

10:35 A.M. Factors in preferences for Szondi test pictures. VICTOR A. JACKSON, *University of Chicago*.

PROBLEM: To investigate factors influencing choice reactions to the Szondi test pictures.

SUBJECTS: 75 normal adults.

PROCEDURE: Various attributes of the Szondi pictures were postulated as influencing choice-reactions to the pictures. Among these were age, esthetic qualities, socioeconomic status, intelligence, friendliness, happiness, masculinity, ascendance, reflectiveness, activity, and impulsiveness. These attributes were derived from the categorization of a large number of free-associations to the best-liked and least-liked pictures obtained from patients in a mental hygiene clinic to whom the Szondi test had been administered as part of the diagnostic testing procedure. A number of clinical psychologists arrayed the 48 pictures in Q-sorts (Stephenson) for each of the above categories, and composite Q-sorts were obtained for those attributes for which a study of intercorrelations of judges indicated a high degree of agreement. A composite Q-sort for "popularity" was obtained from the Q-sorts of 75 normal adults who arrayed the 48 pictures from least-liked to best-liked, and correlations were obtained between this Q-sort and the composite Q-sorts for the above-mentioned attributes. Finally, a matrix of intercorrelations of Q-sorts of the pictures from least-liked to best-liked by 20 randomly selected adults was factor analyzed. RESULTS: The attributes for which there was high agreement among judges, and their correlations with popularity, are as follows: esthetic qualities, .79; friendliness, .61; intelligence, .59; happiness, .50; socioeconomic status, .45; age, -.03; and masculinity, -.18. The factor analysis of the preference sorts yielded five factors, only three of which were clearly interpretable. These refer to esthetic qualities, friendliness, and socioeconomic status.

ROUND TABLE: REHABILITATION—ITS APPROACH AND SIGNIFICANCE TO PSYCHOLOGY

9:50–11:50 A.M., Thursday, East Room, Mayflower

(Co-sponsored with Divisions 13, 17, and the Office of Vocational Rehabilitation.)

PHYLLIS BARTELME, Chairman

Participants: DONALD H. LABELSTEIN, ADDISON M. DUVAL, KENNETH W. HAMILTON, CHARLES ODELL, DONALD A. COVALT, MORTON A. SEIDENFELD.

GENERAL PROBLEMS IN PSYCHOPATHOLOGY II

11:00–12:00 M., Thursday, Ballroom, Mayflower

JOSEPH ZUBIN, Chairman

11:00 A.M. A method for the dynamic representation of personality data. GEORGE T. LODGE, *VA Hospital, Lebanon, Pa.*

ASSUMPTIONS: (a) Control and Affect may be viewed as relatively independent intrapsychic power systems. (b) Personality properties are functions of the power ratio momentarily existing between control and affect components within individual personality structure. (c) Various psychometric procedures, e.g., the Rorschach technique, afford meaningful indices of the relative strengths of control and affect components operative in a particular test response. Any given response, then, may be represented as a vector on a Cartesian coordinate frame whose x and y axes refer respectively to the relative strengths of the control and affect components. With the origin of the frame at a point of neutrality, weakness in either component is represented as negative and strength as positive. In the instance of a Rorschach response, form-level affords an index of the strength of control while the amount of expression of color, shading or movement provides a measure of affect. Thus any determinant score or combination may be plotted as a vector having a specific directional value within a 360° range. To simplify computations each scorable response is considered of unit vector length, although weighted intensity values may be assigned if preferred. By the law for the composition of forces, the determinant scores of an entire protocol may thus be represented as a single vector quantity to which all the responses in the record have proportionately contributed. Or, a series of separate vectors may be plotted end to end to chart geometrically the path traversed by a subject through the control-affect field as he responds to a succession of stimulus situations. Charts are presented for a variety of personality pictures illustrating characteristic patterns encountered in major psychiatric syndromes. Charles J. Steenbarger of Letterman Army Hospital, former co-worker of the writer, contributed materially to the formulation of above method. (Slides)

11:15 A.M. A suggested hospitalization routine for the alcoholic patient. CHARLES E. THOMPSON and PAYTON KOLB, *VA Hospital, North Little Rock, Arkansas.*

THEME: A therapeutic regime has been established in a Veterans Administration hospital which incorporates a nationally recognized chapter of Alcoholics Anonymous.

PROBLEM: As Alcoholics Anonymous is recognized as the best organization for continued supervision of the individual after leaving the hospital, it is primarily necessary to integrate him on the hospital level into such an organization.

SUBJECTS: In one year's time approximately 217 patients have voluntarily entered into this program with a rehospitalization of 20.

PROCEDURE: The central core of this program is a patient-run Alcoholics Anonymous chapter. The sessions are held daily and follow the routine of all other Alcoholics Anonymous chapters except for the actual therapy involved. The current members are held responsible for the recruiting of new members as the program is entirely voluntary. Contact is made between the patient and local Alcoholics Anonymous chapters while he is hospitalized. A continuous effort is made to get the patient to accept responsibility for his past and present behavior.

CONCLUSIONS: This procedure is not offered as a "cure" but rather as one hospital's approach to the perplexing as well as persistent alcoholic dilemma.

11:30 A.M. Social structure and psychiatric disorder. H. A. ROBINSON, F. C. REDLICH, and A. B. HOLLINGSHEAD, *Yale University.*

This is a report on the first phase of a research project, sponsored by the United States Public Health Service, which deals with the relationship of psychiatric disorder to social structure. Participating investigators include psychiatrists, sociologists, and psychologists.

Two primary hypotheses are being tested: (a) that the incidence of psychiatric disorder is related to the social level of patients, and (b) that type of disorder (diagnosis) is related to class position. Subsidiary hypotheses posit relationships between the social level of patients and: (a) therapeutic outcome, (b) social mobility as dynamically related to disorder, and (c) types of psychiatric treatment employed.

The study took place in the metropolitan area of New Haven, Connecticut. As a comparison group, a 5 per cent random sample of adults (3,400 cases) was obtained and basic information collected in order reliably to complete a social stratification. The patient group comprised approximately a 100 per cent sample (2,000 cases) of psychiatric patients legally resident in the area who were in treatment as of a given date. By interviewing therapists and scrutinizing hospital and clinical records, stratification data were collected for this group, together with information on fifty standardized items of a cultural and psychiatric nature. These data were tested for reliability and analyzed.

Results strongly support both main hypotheses. A significant inverse relationship ($p < .001$) was found between social level and incidence of psychiatric patients. Similarly marked relationships were found between social position and diagnosis. Examples: schizophrenics occur far above expectancy in the

lower social levels; psychoneurotics are found above expectancy in the upper levels.

It is suggested that these findings may illuminate the importance of social class for the etiology and phenomenology of mental disorder, and may have important implications for diagnosis and treatment. (Slides)

11:45 A.M. The mental patient looks at *Snake Pit*. CHESTER C. BENNETT and JOHN ARSENIAN, *Boston University and Boston State Hospital*.

The motion picture *Snake Pit* was recently shown to mental patients at a large State Hospital. It was introduced without special announcement or fanfare as "movie of the week" in the regular program of entertainment for patients. It was shown several times throughout the hospital and the able-bodied patients, without selection, were permitted, but not urged, to attend. About 25% of the patient population saw the picture.

The occasion prompted a survey of patient reactions to this experience. Through the medium of a structured interview, about 150 patients (a 20% sample of the total audience) were asked what the picture was about, what was its "lesson," did it leave them feeling encouraged or discouraged, did they think it should be shown to patients, and other relevant questions. Responses are coded and analyzed in relation to age, sex, diagnostic and prognostic stratifications of the group.

The responses of 25 student nurses who answered the same questions provide a comparative basis for interpreting certain trends of opinion in the two groups.

The survey disclosed a surprisingly articulate and discriminating appreciation of the meaning and value of the picture among the patients interviewed, and supports the inference that its effect was, in the main, therapeutic. As a by-product, the survey demonstrates certain problems as well as possibilities in polling the opinions of mental patients.

ORGANICITY—ITS SIGNS AND SIGNIFICANCES

1:40-2:40 P.M., Thursday, Ballroom, Mayflower

KURT GOLDSTEIN, Chairman

1:40 P.M. The Diagnostic Memory Scale: I. Comparison of brain-damaged patients and normal controls. ROBERT S. MORROW and JACOB COHEN, *VA Hospital, Bronx, N. Y.*

PROBLEM: To develop a scale testing memory functioning which has demonstrable validity in the differential diagnosis of brain-damaged patients.

SUBJECTS: All were male veterans between the ages of

20 and 44. The brain-damaged group consisted of 44 neurologically diagnosed hospital patients; the normal controls, numbering 46, were a mixed group of hospital attendants, clerical personnel, and minor surgical patients. The two groups were found to be equated for mean age, years of education, and combined Wechsler-Bellevue Forms I and II Information subtest weighted scores.

PROCEDURE: The scale was individually administered to the 90 subjects. It consists of a standardized interview followed by four tests each of which yields one or more quantitative variables. A brief description of the scale follows:

A. Personal Information: A standardized interview centering upon memory for personal information.

I. Recall (Old Learning)-Facts: Items of general information to which all subjects had been presumably exposed.

II. Recall (New Learning): Recall of incidentally memorized objects presented pictorially. Three variables were scored: (a) immediate recall, (b) a second recall following interpolated material, and (c) per cent of (a) recalled in (b).

III. Recognition (Old Learning): Identification of photographs of famous people.

IV. Combined Recognition and Recall (New Learning): The subject is required to select five previously presented photographs of men from among a group of twenty and recall previously given identifying information about each.

RESULTS: Using *t* and chi-square tests, the brain-damaged group was found to perform at significantly lower levels (*p* less than .05) than the normal controls on all variables except number correct on Test III.

CONCLUSION: The scale offers a promising lead in differential diagnosis of brain-damaged patients. (Slides)

1:55 P.M. An evaluation of the Rorschach method for the study of brain injury. MARGUERITE R. HERTZ and LEAH M. LOEHRKE, *Western Reserve University and Crite VA Hospital, Cleveland, Ohio*.

Of late, much reliance has been placed on the Rorschach method for diagnosing brain injury. Current research with "sign batteries" indicates, however, that "signs" cannot be relied upon exclusively for the evaluation of the personality or for diagnosis of organic defect.

The hypothesis is offered that a configurational approach emphasizing qualitative as well as the quantitative features of the Rorschach record is more effective for personality evaluation and for diagnosis of organic defect. A further hypothesis is tested, that the experienced Rorschach clinician can identify such con-

figurations with a high degree of reliability despite their subjective nature.

Rorschach records of 50 posttraumatic patients, ages twenty to fifty, were compared with those of 50 nonorganic psychotic and 50 nonorganic neurotic patients of comparable age, educational, and occupational levels, in terms of thirty-four general configurations consisting of traits especially characteristic of personality alteration accompanying organicity. These configurations were described in detail in terms of qualitative and quantitative aspects of the Rorschach record. The groups were studied for the average number of configurations, the proportions of each group giving specific configurations, differences between them, and the number of configurations necessary to differentiate the groups reliably.

In addition, twenty-four records were selected at random and a second experienced Rorschach examiner identified the configurations independently.

Results indicate that (a) more organic than nonorganic patients exhibit twenty-two of the thirty-four configurations; (b) five or more of the reliable configurations are significant in differentiating organicity; nine or more are especially indicative of organicity; (c) significant agreement is demonstrated between the two examiners on thirty-two of the thirty-four configurations at the 5 per cent level or better.

It is concluded that the configurational approach is reliable and effective in evaluating posttraumatic personality changes. Further, experienced clinicians are able to identify configurations with a high degree of accuracy. (Slides)

2:10 P.M. Use of the Hooper Visual Organization Test in the differentiation of organic brain pathology from normal, psychoneurotic, and schizophrenic reactions. H. ELSTON HOOPER, *VA Hospital, Long Beach, California.*

The Visual Organization Test (VOT) was designed as a perceptual task that would reflect organic brain pathology and allow for quantitative evaluation of the deficit manifested. The VOT requires that S identify a simple, familiar object that is cut into several parts and rearranged on the paper. Thirty such items, varying in difficulty, are presented.

For the present study of the validity of the test 200 Ss in Veterans Administration hospitals were classified in diagnostic groups according to neuropsychiatric diagnosis. The organic brain pathology group included patients with inflammatory, degenerative, toxic, tumorous, or traumatic brain disorder. The schizophrenic group consisted primarily of paranoid type in the early stages of the psychosis. Psychoneurotic patients included some psychosomatic reactions. A control group of "normal" adults was selected from

patients without history of head injury or of psychiatric treatment.

Results from the administration of the VOT were treated statistically by analysis of variance and *t*-ratio tests. The *F* value indicated significant differences in the subgroup populations. Tests of the differences in mean values for the normal, schizophrenic, and psychoneurotic groups revealed no significant differences. The organic brain pathology group, however, was found to be different from each of the other three groups at well beyond the 1 per cent level of confidence. Distributions for each group were analyzed and the effectiveness of various cut-off points are presented.

The results indicate that the VOT is a valid instrument for use in the diagnosis of organic brain pathology and in the exclusion of functional disorders of schizophrenia and psychoneurosis as represented in the groups studied. In clinical use the combination of the quantitative analysis with a qualitative appraisal of the incorrect responses for evidences of concreteness, perseveration, bizarreness, etc., should make the test a valuable addition to individual or group testing batteries. (Slides)

2:25 P.M. A comparative study of psychological changes associated with lesions in various areas of the cortex. PAUL D. GREENBERG, *Fort Custer VA Hospital.*

PROBLEM: In order to determine whether the nature of the psychological changes in patients with brain lesions is related to the specific cortical area affected, neurosurgical patients with lesions in different lobes of the brain were studied, using a battery of psychological test techniques.

SUBJECTS: Statistical analysis of the data was limited to those cases with surgically verified focal cortical lesions. This included 8 patients with frontal lobe lesions, 6 parietals and 6 temporals; 11 normal controls were used.

PROCEDURE: Each S was administered a battery of 13 psychological test methods, and the data were treated by various statistical techniques.

RESULTS: The tests which, statistically, proved to be of most value for differential diagnosis were the Wechsler-Bellevue Digit-Symbol subtest and several indices derived from an experimental battery. The respect in which these tests were principally effective was to distinguish all of the patient groups from the normal controls. The differences among the three patient groups, on the other hand, were consistently small. A performance pattern which most definitively characterized the patients in contrast to the normal controls was noted, and certain elements common to the impaired performance of the patients were sug-

gested. With a view toward enhancing the effectiveness of the single test indices, an impairment index was developed from a composite of the more sensitive single measures.

CONCLUSIONS: The evidence is interpreted as indicating that the cortical location of the lesion is not an important factor in determining the psychological changes associated with brain pathology, at least as far as the present test battery is concerned. The results do, however, support the contention that psychological deficits consistently accompany organic brain lesions and removal of brain tissue, and these deficits are detectable through the use of specialized psychological tests.

EXPERIMENTAL PSYCHOPATHOLOGY

2:50-3:50 P.M., Thursday, Ballroom, Mayflower

NEAL E. MILLER, Chairman

2:50 P.M. Relationship as a reinforcing factor in superego functions. LEWIS BERNSTEIN, *VA Hospital, Denver.*

PROBLEM: Mowrer has criticized Freud's concept of the part played by the superego in neurotic conflicts on the ground that it contradicts the principle that learning which is not periodically reinforced will tend to be extinguished. Benjamin, however, has hypothesized that reinforcement occurs whenever object relationships are maintained. As a test of Benjamin's relationship-reinforcement hypothesis, it was predicted by him that experimental animals with whom a relationship was established by the experimenter would be more resistant to extinction of a learned habit than animals with whom a minimal relationship existed.

SUBJECTS AND PROCEDURE: 50 albino rats were used. Each litter was split into three groups at weaning: Group EH (extra-handling), Group IH (intermediate-handling), and NH (no-handling).

RESULTS: For original learning, Group EH required fewer number of trials to master the habit ($p = .001$), and made fewer errors ($p = .001$) than either of the other groups.

Results for extinction trials indicate that animals who were handled throughout both parts of the experiment made fewer errors than animals who were unhandled throughout the experiment ($p = .01$), or who received intermediate handling throughout the experiment ($p = .1$).

Unhandled animals who were handled for the first time during extinction trials made fewer errors than animals who continued to be unhandled ($p = .3$).

Animals who were handled throughout both parts of the experiment made fewer errors than animals who

were handled for the first time during extinction trials ($p = .1$).

Handled animals with whom the relationship was interrupted made more errors than animals with whom the relationship was continued during extinction trials ($p = .001$). In fact, the animals with whom the relationship was interrupted made more errors than the unhandled animals ($p = .1$).

CONCLUSIONS: 1. A relationship between experimental animal and experimenter affects the course of original learning.

2. Evidence is offered to support his hypothesis that a relationship acts as a reinforcing factor during retention, although such retained behavior no longer serves a useful purpose.

3:05 P.M. The production of scattered speech via personalized distraction: An investigation of continuity in normal and schizophrenic language. LEONARD HASSOL, NORMAN CAMERON, and ANN MAGARET, *Berkshire Industrial Farm and University of Wisconsin.*

The continuity principle of modern behavior pathology holds that disorganization of language in the schizophrenic derives from the confusion which any normal person may exhibit under strong, persistent personal stress. If this principle is valid, we should expect personally significant material, elicited from normal Ss, when used as a distracting agent, to produce significantly increased language disorganization, or scattered speech, comparable to that of the schizophrenic.

Our Ss were 16 male and 16 female college students. Half the Ss composed a TAT story which was wire-recorded and then played back through earphones while they attempted to compose a second story about the same stimulus card. The controls merely composed two stories successively to the same card. Protocols thus secured were rated for scatter, using criteria derived from Cameron's analysis of schizophrenic responses, and for level of projection, using a rating scale developed by Terry.

The t tests for significance of difference between correlated means, applied to scatter scores and level of projection scores, obtained via rating procedures, yielded these results:

1. Significantly more scattered speech under personalized distraction.

2. Significantly more meaningful stories, from a personality dynamics standpoint, under personalized distraction.

3. No significant trend for scatter to increase as a function of distraction fatigue.

Analysis of variance applied to scatter scores

yielded these results: 1. No differential susceptibility to scatter appeared between the sexes.

2. Experimental conditions were the prepotent factor in the elicitation of scatter.

CONCLUSIONS: (a) Disorganized, nonsequential speech is part of the behavioral repertoire of all human beings, requiring, in part, the intrusion of private fantasy material into attempts at communication to release it.

(b) Personally meaningful distraction is a powerful disruptor of repressive and defense mechanisms and therefore materially increases the clinical significance of TAT stories secured under its influence.

3:20 A.M. Effects of anxiety and morphine on the anticipation and discrimination of painful radiant thermal stimuli. CONAN KORNETSKY, *National Institute of Mental Health, Addiction Research Center, USPHS Hospital and the University of Kentucky, Lexington, Kentucky.*

The effects of subcutaneous injections of 15 mg. of morphine on anticipation, and estimation of intensities of radiant thermal pain stimuli were studied under two conditions: (a) under formal conditions the experimenter treated the subject in a formal, impersonal manner, giving neither reassurance nor explanation; (b) under informal conditions the experimenter treated the Ss in an informal friendly manner, giving reassurance and explanation designed to mitigate apprehension in the experimental situation. It was assumed that under formal conditions there would be much more anxiety than under informal conditions.

The Ss used were 32 postaddicts (individuals with previous histories of opiate addiction who had not received such drugs for a period of several months prior to the experiment). Sixteen of the Ss were used under formal conditions and sixteen under informal conditions. The Ss were used on two separate days, half in each group receiving morphine on the first day and half on the second. The Ss were required to judge each radiant heat stimulus as being either "stronger" or "weaker" than a previously delivered standard. They were instructed to release a key as quickly as possible as soon as they thought they felt pain. This was interpreted as a specific measure of "anticipation."

Under formal conditions the administration of morphine raised significantly the differential threshold and lessened the amount of anticipation of painful stimuli. Under informal conditions, where anxiety was minimized, morphine administration did not significantly affect either the differential threshold or the anticipation of painful stimuli.

The following conclusions were drawn from the results: (a) the efficacy of morphine is related to

anticipatory anxiety; when anxiety is not present morphine has little effect upon the sensitivity of the organism to pain, and (b) anticipatory anxiety is an important variable that must be considered when studying pain. (Slides)

3:35 P.M. The learning of "color shock." HARRY BENDER, *Yale University.* (Sponsor, Seymour B. Sarason)

PROBLEM: The hypothesis studied was that "color shock," defined as increased latency of response to chromatic ink blots, may result from previous association of colors with unpleasant experiences.

SUBJECTS: 24 female college juniors.

PROCEDURE: A test similar to the Knox cubes was individually administered to experimental and control Ss. Prior to administration, the 12 experimental Ss were informed that the test measured intelligence and scholastic aptitude. Failure on 17 out of 20 items was produced with experimental Ss, their failure being apparent to them throughout the test. The test was neutrally structured for control Ss, and the items administered were simple enough so that each S succeeded on almost all items.

Test materials were painted blue for half the Ss in each group, and brown for the other half.

All Ss were then given an ink-blot interpretation test with monochromatic cards, half of which were blue, half brown.

Position and adaptation effects were controlled.

RESULTS: 1. A test-anxiety questionnaire, administered immediately following the experiment, provided evidence that negative affect was greater in the experimental group ($p = .054$).

2. Latencies of experimental Ss on ink blots of the same color as was part of the "traumatic" stimulus situation were longer than latencies on differently colored cards ($p = .036$).

3. The difference between latencies on "traumatic" and differently colored cards was greater for the experimental than for the control group ($p = .09$).

CONCLUSIONS: The theoretical basis for this study was that colors associated with unpleasant situations would be expected to serve as cues for responses partially incompatible with the requirements of the ink-blot test. These task-irrelevant responses (e.g., ego-defensive self-verbalizations) would inhibit and delay test-relevant responses. The results offer support for this hypothesis. (Slides)

THE SCHIZOPHRENIC PERSONALITY AND PROCESS

4:00-5:00 P.M., Thursday, Ballroom, Mayflower

DAVID SHAKOW, Chairman

4:00 P.M. The performance of schizophrenic and normal individuals following frustration. HAROLD WILENSKY, *Franklin D. Roosevelt VA Hospital and New York University.*

PROBLEM: Theories relating frustration and schizophrenia are based mainly upon clinical impressions. This study was initiated to provide experimental evidence regarding differences in frustration tolerance between schizophrenics and normals.

SUBJECTS: Two male veteran groups, 48 schizophrenic patients and 48 normals, equated for age, education, and intelligence.

PROCEDURE: Individuals in both groups were subjected to frustration in four tasks (auditory memory, visual memory, auditory perception, visual perception). Each task consisted of two equivalent forms with items graded in difficulty. One form (pre-frustration) was administered with items in ascending order of difficulty until a prescribed number of failures occurred. The alternate form (postfrustration) was administered with items in descending order of difficulty. Failures were indicated without critical comment. The change in score on the equivalent post-frustration form was the measure of adequacy of reaction to frustration. The *t* test, analysis of variance, and chi-square techniques were employed to evaluate group differences in frustration tolerance, cumulative effects, and qualitative reactions to frustration.

RESULTS: Schizophrenics performed significantly more poorly than normals following frustration in all tasks, supporting the hypothesis of lowered frustration tolerance in schizophrenics.

During failure, when cues for identifying perceptual stimuli were unavailable, schizophrenics made significantly more guesses than normals. Such guesses were largely perseverative rather than genuinely fresh attempts at solution.

By contrast, when the task was again solvable, schizophrenics tended to abandon the task more readily than normals.

Normals more readily admitted poor performance and also unpleasant feelings (shame or depression) accompanying failure than did schizophrenics. A trend suggesting a cumulative effect of frustration from task to task emerged in the normals but not in the schizophrenics, suggesting that the grossly inadequate reactions of schizophrenics may serve as tension reducing mechanisms so that continuing effects were not evident.

4:15 P.M. The attainment of social concepts in schizophrenia. MORDECAI WHITEMAN, *New York University Graduate School.*

PROBLEM: A hypothesis was derived from Cameron's view of schizophrenic thinking as a product of the so-

cial disarticulation of this diagnostic group, as contrasted with Goldstein's interpretation of the defect in schizophrenic thought as the result of an impairment of the abstract attitude. The hypothesis was that on a test of social concepts (e.g., help, reassurance), schizophrenics would exhibit a greater decrement relative to normals than on tests of formal concepts (e.g., volume, time).

SUBJECTS: 31 schizophrenics were matched with an equal number of normal controls with respect to age, education, sex, and vocabulary score. The groups as a whole were also comparable in occupational status, nativity, and urban residence.

PROCEDURE: Two formal concept tests (one verbal and one performance) and a pictorial social concept test, devised for the purpose of this experiment, were administered to the two groups. The populations were then equated statistically on the formal concept scores. Direct matchings, utilizing small samples, supplemented the equating procedure.

RESULTS: Significant differences in favor of the controls were obtained between the two groups on both types of test. However, schizophrenic decrement on the social concept test proved significantly greater than decrement on the formal concept tests. This differential decrement obtained whether timed or untimed scores of the social concept test were used as dependent variables. The social concept test also differentiated the two groups with respect to relative incidence of individualistic responses, rejections, explicitly formulated concepts, physicalistic responses, and inappropriate responses.

CONCLUSIONS: It is believed that the concept of impairment of abstract attitude is insufficient to account for the selective schizophrenic impairment on the social concept test. The predicted decrement has been interpreted as lending presumptive support to a theoretical position which also stresses the importance of social withdrawal as a determinant of schizophrenic cognitive functioning.

4:30 P.M. Some quantitative relations between projective test productions and social behavior as a function of degree of illness in paranoid schizophrenics. VIRGINIA M. BROWN and DONALD D. GLAD, *Human Resources Research Center, Lowry Field, Denver, Colorado and University of Colorado.*

PROBLEM: To describe changing relationships between social and projective test behaviors.

SUBJECT: 6 clinically diagnosed paranoid schizophrenics.

PROCEDURES: The patients, exclusively on group therapy treatment, were tested before and after a series of fifteen group meetings. All therapy behavior was

coded by two observers trained to an inter-observer reliability of .80 to .90 in a social-interactional coding system. Projective tests included the D-V Emotional Projection Test, the TAT, and a social-relations TAT-like test. Projective tests were coded in the same dimensions as the group therapy behavior. These dimensions included: feelings, social-behaviors, perceptions of the self, perceptions of others, desires about the self, and desires about others. The first four and the last four group sessions were compared with the projective test responses.

RESULTS: The following statistically significant changes were observed:

1. A greater difference in projective test "feelings" and socially observed "feelings" occurred in the early than the late stage of therapy.

2. Behaviors categorized as socially useful were most likely to occur in projective tests at the early stage and in social behaviors at the late stage. Behaviors categorized as socially inadequate were most likely to occur in behavior at the early and in projective tests at the late stage of therapy.

3. Relations between socially observed feelings and feelings coded in the D-V Emotional Projection Test were as follows:

Anxiety decreased behaviorally and increased projectively from early to late therapy.

In the D-V E.P.T., the increase in anxiety was accompanied by a decrease of "activity" responses involving a minimum of feeling. Previous studies have shown that "activity" responses such as "wondering," "thinking," "talking," etc., are typical of the paranoid schizophrenic when he is asked to describe "feelings or emotions." The present study indicates that these "activity" responses disappear with therapeutic progress and are supplanted by the more usual feeling terms—particularly anxiety. (Slides)

4:45 P.M. An experimental evaluation of learning as therapy in schizophrenia. HENRY N. PETERS, *VA Hospital, North Little Rock, Arkansas.*

PROBLEM: It is hypothesized (a) that a part of schizophrenia is a fixed reaction to frustration, and (b) that a prolonged period of successful learning will diminish this reaction.

SUBJECTS: 36 extremely withdrawn schizophrenics of poor prognosis.

PROCEDURE: The experimental group spent two hours every morning for three months in an intensive O.T. program. Every morning each patient went individually to a separate room where he did problem solving for fudge. During the first half of the three-month period were on subshock insulin; during the whole of the period, they had breakfast only after completion

of learning. The learning variable was omitted with patients in the partial control group. Otherwise they were treated the same as the experimental. The third group was not distinguished in any way from others on the ward from which all patients were chosen.

Special problems and pieces of apparatus were developed for these patients and for the use of fudge as a direct incentive. The problems were presented in order of increasing difficulty; success always followed a series of overt responses. Guidance, manual and verbal, was used when necessary. A daily assignment was made for each patient which was commensurate with his progress. The sequence of problems created conflict of reaction patterns. Problem materials included simple obstruction, mazes, multiple-choice, concept formation, and social relation.

Conventional learning records were taken for the experimental group. Objective performance records were kept for all patients during and six months after the experimental period.

RESULTS: (a) Only one patient failed to cooperate in problem solving. (b) Features of the learning reactions of schizophrenics block their successful problem solving. (c) Objective criteria of improvement show the experimental conditions to be more effective than either of the other two groups.

CONCLUSION: Controlled problem solving is a beneficial form of treatment in some extremely withdrawn schizophrenics. (Slides)

SYMPOSIUM: PROFESSIONAL PROBLEMS IN CLINICAL PSYCHOLOGY

9:50-11:50 A.M., Friday, Presidential Room, Statler

KARL F. HEISER, Chairman

Participants: GEORGE E. GARDNER, ANN MAGARET, DAVID SHAKOW, ROBERT I. WATSON, and G. R. WENDT.

GROUP PSYCHOTHERAPY

1:40-2:40 P.M., Friday, Presidential Room, Statler

HAROLD B. PEPINSKY, Chairman

1:40 P.M. A program for training of group psychotherapists. HERBERT WEINSTEIN, SEYMOUR SCHPOONT, EDWARD EPSTEIN, and MELVIN FRANK, *Chicago State Hospital.* (Sponsor, William H. Lundin)

The purpose of this paper is to present a method for the training of group psychotherapists. The material stems from the training procedures used and developed by the Psychology Department of Chicago

State Hospital. Here we use a co-therapist system in which two therapists of about equal background work together or, in the case of training, an experienced therapist (training therapist) is teamed with the beginner.

The training scheme is broken down into three phases: pretherapy, therapy activity, and posttherapy. A discussion of the various techniques and problems related to the above is included.

The co-therapy system, with its emphasis on in-therapy training, has been described. The advantages of this training program are presented, with the major advantage being the fostering of a healthy working relationship between neophyte and training therapist, leading to growth, as experience is gained in working together. With accepted limitations its use in a state hospital setting has been fruitful in terms of meeting increased psychotherapeutic needs and in providing students with a well-supervised group psychotherapeutic training program.

1:55 P.M. Countertransference in group psychotherapy and its controls by the use of co-therapists. FRANK J. LOEFFLER, ADRIAN SOLOMON, and GEORGE M. FRANK, *Chicago State Hospital*. (Sponsor, William H. Lundin)

Although countertransference has been given some consideration in individual psychotherapy, investigations of this phenomenon have been almost completely neglected in group psychotherapy. Countertransference manifests itself differently in group than in individual psychotherapy, but the limitations arising from this phenomenon in the group can be substantially controlled by the use of two therapists.

Countertransferences arising in group psychotherapy are not merely the summation of individual countertransferences but may also be attributed to the relationship of members of the group to each other as well as to the perception of the group as a unit. Four kinds of countertransference are analyzed: (a) positive; (b) negative; (c) aim-attachment; and (d) inconsistent. Both their intra- and extragroup manifestations are discussed as they often present obstacles in the path of therapeutic progress and must be recognized in order to be handled. The co-therapist technique provides effective controls whereby countertransferences may be identified, dealt with appropriately and consequently minimized. These controls can be seen to operate in the following ways: (a) Unlike the "single therapist with observer" method, one therapist can not only recognize his partner's countertransference within the group, but can immediately alleviate its effects; (b) Shared responsibility for therapeutic progress reduces "excessive" individual

ego-involvement; (c) By providing a source of support, the therapy partner may make less likely the possibility that his colleague will develop a defensive or negative countertransference towards a threatening member of the group; (d) The realization that one is not the sole therapist and therefore is subject to the professional scrutiny of a partner encourages a critical self-evaluation of behavior in the group setting and leads to awareness of the reasons for one's actions.

2:10 P.M. Group psychotherapy with acutely disturbed schizophrenic patients. HERMAN FEIFEL and ARNOLD D. SCHWARTZ, *Winter VA Hospital, Topeka, Kansas*. (Sponsor, Herman Feifel)

PROBLEM: To explore the effects of an open-end type of group psychotherapy with severely disturbed schizophrenics in an NP hospital setting.

SUBJECTS: 36 male veteran patients, mostly schizophrenic reaction, paranoid type, on a closed ward; average intelligence; age range 21 to 61 with mean of 36 years; mean educational level of 10 years.

PROCEDURE: Meetings of one hour were held twice weekly for 20 sessions. Two therapists, one of whom was the ward doctor, alternated in roles of group leader and recorder. Patients introduced all material and could talk about anything they wished. Pathological activity, i.e., physical assaultiveness or self-destructive behavior, was not permitted. New patients were admitted as older members left.

RESULTS: 1. Despite continued entrance of new members, groups as a whole moved from autistic thinking and individual preoccupation to concern with common problems and realistic social relationships.

2. In group interaction, age factor per se, was less important than similarity of problems.

3. Main themes dominating discussions were: (a) Guilt feelings, (b) Sex matters, (c) Stigmata of mental illness, (d) Adjustment outside hospital.

4. Individual therapy was facilitated.

5. Broad statistical comparison with a similar group of patients, previously on same ward with same doctor and an identical treatment program except for group psychotherapy, indicated that group psychotherapy patients tended to be discharged somewhat faster and were able to make better use of trial visits. However, the most impressive finding was the *quality* of the improvement.

CONCLUSION: The method is adaptable to treating acutely disturbed schizophrenics and helpful in accelerating treatment. It also provides understanding of phases of the schizophrenic process. There is need for further study of the open-end versus closed group, use of multi-therapists, "attention" aspect of group psychotherapy, etc.

2:25 P.M. Some quantitative changes in a controlled group therapy process with paranoid schizophrenics. DONALD D. GLAD and RICHARD B. HARTLEY, *University of Colorado and University of Denver.*

PROBLEM: To describe operationally the changes occurring in a paranoid schizophrenic therapy group.

SUBJECTS: 6 hospitalized paranoid schizophrenics evenly divided as to sex, and ranging in age from 25 to 40 years.

PROCEDURES: The therapy consisted of systematic rotation of four theoretically and operationally different therapy variables, previously described. Since the present problem is to describe the over-all changes the fifteen sessions included in the analysis were divided into early, middle, and late periods in such a way as to cancel out differential effects of the therapy variables. Two psychologists conducted the therapy sessions. They were observed along with the patients by two psychologists trained to an interobserver reliability of .80 to .90 in a social-interactional coding system. The coding dimensions included: feelings, social behaviors, perceptions of the self, perceptions of others, desires about the self, and desires about others. Small sample t and χ^2 statistics were used to differentiate changes over time.

RESULTS: A. Statistically significant changes:

1. Increases occurred in positive feelings toward others and in positive feelings toward the self.

2. Decreases occurred: in anxiety; in negative feelings toward others; and in the general affective intensity of behavior.

3. Shifts occurred in molar combinations of feelings and behavior. In early therapy criticalness toward others was associated with disturbed feelings. In late therapy criticalness was associated with positive feelings toward criticized persons.

4. The individual variety of behavior shifted from an early relatively limited range—rigidity—to relative variety or flexibility in late therapy.

B. Absence of change:

No systematic group changes were found in perceptions of the self, perceptions of others, desires about the self, or desires about others. (Slides)

SYMPOSIUM: DIAGNOSTIC CASE SYMPOSIUM: "THE CASE OF JAY"

1:40-3:40 P.M., Friday, Ballroom, Mayflower

(Co-sponsored with the Society for Projective Techniques.)

EDWIN S. SHNEIDMAN, Chairman

Participants: REUBEN FINE, ROBERT R. HOLT, SAMUEL B. KUTASH, MORTIMER M. MEYER, Z. A. PIOTROWSKI, PAULINE VORHAUS.

SYMPOSIUM: WHAT SHOULD BE THE PROFESSIONAL TRAINING OF EDUCATIONAL PSYCHOLOGISTS?

1:40-3:40 P.M., Friday, Congressional Room, Statler

(Co-sponsored with Divisions 15 and 16.
See Division 15's program.)

RESEARCH ON FREUDIAN HYPOTHESES

2:50-3:50 P.M., Friday, Presidential Room, Statler

ROBERT R. SEARS, Chairman

2:50 P.M. A study of the Freudian theory of paranoia by means of the Blacky Pictures technique. MARVIN L. ARONSON, *VA Mental Hygiene Clinic, New York Regional Office.*

PROBLEM: The purpose of this study was to determine whether or not a group of paranoid individuals would approximate a homosexual pattern on each of the Blacky dimensions relating to homosexuality (or its derivatives) to a greater extent than would a control group of non-paranoid psychotics and a group of "normals."

SUBJECTS: 1. Paranoid Group—consisting of 30 psychotic patients in whom paranoid delusions were the most prominent symptoms.

2. Psychotic Group—consisting of 30 psychotic patients who were relatively less delusional than the patients in the paranoid group, but who were equivalent to them with respect to age, education, intelligence, occupation, religious affiliations, and length of stay in the hospital.

3. Normal Group—consisting of thirty nonhospitalized individuals who were, presumably, less delusional than the patients in either the paranoid or the psychotic groups, but who were equivalent to them on age, education, intelligence, occupation, and religious affiliations.

PROCEDURE: On the basis of psychoanalytic theory, a number of predictions were made as to how the paranoids would differ from the psychotics and from the normals on each of the Blacky dimensions. Where psychoanalytic theory did not stipulate a difference between the paranoids and either of the control groups, no predictions were made.

RESULTS: A large number of analytically-derived hypotheses as to how the paranoids would differ from either of the control groups were supported. The paranoids tended throughout to differ more markedly

from the normals than from the psychotics. The paranoids showed greater evidence of disturbance than the normals on the following Blacky dimensions: oral eroticism, oral sadism, anal retentiveness, masturbation guilt, castration anxiety, identification process, internalized guilt feelings, narcissistic love-object, and anaclitic love-object. The paranoids were more disturbed than the psychotics on the dimensions of anal retentiveness and internalized guilt feelings.

3:05 P.M. Management of anxiety in anxiety neurosis and paranoid schizophrenia. MURRAY BLACKER, *New York University—VA, New York Regional Office.*

The problem was to investigate the reactions of a group of anxiety neurotics and a group of paranoid schizophrenics to culturally tabooed heteroerotic and homoerotic stimuli for the purpose of testing two aspects of Freudian psychoanalytic theory. These were: (a) That projection is used by the paranoid schizophrenic as a defense against repressed homosexual desires. (b) That the most important area of maladjustment in anxiety neurosis is to be found in current heterosexual activity.

Thirty-four subjects, 17 anxiety neurotics equated with 17 paranoid schizophrenics, were tested individually with eight selected cards of the TAT. Immediately after, each subject was retested with the same cards verbally structured with erotic situations. The standard and structured stories were compared by three experts as to the extent of anxiety and projection. The significance of the differences in the extent of anxiety and projection in each of the stimulus situations—standard, homoerotic, and heteroerotic—was determined by Student's *t* test.

Both groups showed an arousal pattern to the culturally tabooed sexual stimuli, indicating that the material might touch on deep-seated repressions with an arousal of anxiety and defenses against anxiety. The amount of anxiety in the heteroerotic and homoerotic stories of the anxiety neurotic group did not differ significantly. Freud's claim, therefore, in regard to the difficulties in heterosexual activities of this group was not upheld. The paranoid schizophrenic group showed significantly greater use of projection in reaction to the homosexual stimuli compared to the heterosexual. This gives support to Freud's claim that paranoids use projection as a defense against a repressed homosexual wish.

The experiment gives additional evidence that psychoanalytic theory can be approached experimentally. The technique used appears to be an effective way, through the indirect application of the most explosive type of stimuli, of obtaining a clearer understanding of basic character defenses.

3:20 P.M. Differentiating characteristics of latency and adolescence: A psychoanalytically oriented study utilizing projective material. MAIZIE G. GURIN, *University of Michigan.*

The problem of this study was to test experimentally hypotheses derived from psychoanalytic theory and observation concerning the periods of latency and adolescence. These periods are essentially described as stages organized around two different types of psychosexual functioning, but they comprise other important aspects also, which are based on and correlated with this crucial factor. Briefly, adolescents are predicted as showing greater psychosexual conflict than latents, and along with that (a) more evidence of defensive activity, (b) more anxiety and more intense and frequent emotional reactions, (c) more fantasy and abstraction in intellectual functioning, and (d) a higher level of ego development.

In order to test whether the syndromes of latency and adolescence are actually found in the age periods in which they are theoretically expected to appear, two groups of male school children, one from 8-9.5 and one from 12-15.5 years of age, were compared on their responses to a projective instrument, the Michigan Picture Test. Scores on a measure of direct expression of psychosexual interest were significantly greater in the adolescent group. Special methods of measuring certain defenses (avoidance and reaction-formation) were devised, as well as rating scales for the concrete-abstract and reality-fantasy differences. A Tension Index devised for this test was used to obtain a measure of anxiety. A large number of sub-hypotheses were tested.

In addition, two groups were compared in which age was held constant and the amount of psychosexual expression varied to test, more crucially, whether the other factors listed varied in the predicted direction with amount of psychosexual expression.

The findings lend research support to this aspect of psychoanalytic theory. A statistically significant number of items yielded results in the predicted direction, both when age levels differed and when age was held constant. Differences within the 12-15.5 group were more often significant than those within the 8-9.5 group.

3:35 P.M. A quantitative investigation of the validity of Freud's theory of daydreams. WILLIAM SEEMAN, *Mayo Clinic.*

This report is based on an analysis of five different samples of college students (aggregate $N=818$), separate both as to time and geographic location. Satisfactory reliability for the samples is indicated by rank-order coefficients of .85-.95 and by the fact that chi-square tests of homogeneity show a distribu-

tion which one would expect by chance when sampling from homogeneous populations.

Freud's theory of daydreams (together with certain empirical propositions) generates a number of testable hypotheses. Ten such hypotheses were deductively stated, these hypotheses being essentially predictions of where the frequencies for specified types of daydreams are required to lie in consequence of the theory. These daydream types are: daydreams of exploits, vocational success, physical attractiveness, martyr, and sexual daydreams. Frequency, recency, and recurrence of these types were investigated. Analysis of the data was made for the five separate samples. This analysis indicates that the data do, in fact, meet the requirements of the hypotheses by conventionally accepted tests and at conventional limits of significance, and may thus be regarded as confirmatory evidence for validity of the theory. (Slides)

THE RORSCHACH TEST—THEORY AND RESEARCH

4:00–5:00 P.M., Friday, Presidential Room, Staller

MOLLY HARROWER, Chairman

4:00 P.M. The relationship of various types of movement responses in the Rorschach test to personality trait ratings. ROBERT P. BARRELL, *VA Hospital, New Orleans, Louisiana.*

PROBLEM: This is a test of some current principles of Rorschach interpretation. It considers relationships between: (a) human movement (*M*) and intellect; (b) subcategories of *M* and intellect; (c) *M* subcategories and emotional factors; (d) animal motion (*FM*) and "immaturity"; (e) inanimate motion (*m*) and "inner tension."

SUBJECTS: 121 clinical psychology graduate students evaluated in the Veterans Administration Assessment Program.

PROCEDURE: (a) Criteria were pooled staff ratings on various intellectual and emotional traits; (b) above relationships were tested by chi-square and correlational techniques; (c) partial correlations were computed in an attempt to establish independent relationships, partialing out both number of responses (*R*) and *M* (when appropriate).

RESULTS: (a) *M* significantly correlated with criteria of intellectual functioning, independently of *R*; (b) *M* subcategories not independently related to the intellect variables; (c) *M* subcategories not differentially related to the emotional criteria; (d) *FM* and the *M:FM* ratio yield chance correlations with criterion variables measuring "maturity-immaturity"; (e) *m*

responses not significantly related to any criterion variable purportedly measuring "inner tension."

CONCLUSIONS: (a) The clinician is justified in utilizing *M* as a partial indicator of intellectual functioning and imagination; (b) use of the *M* subcategories does not appear to be justified, since they are independently related neither to the intellectual nor to the emotional variables tested; (c) the widespread use of *FM* as an indicator of "immaturity" is not substantiated; (d) doubt is likewise cast on the use of *m* as a measure of "inner tension." Although employment of a highly selected population forces us to treat conclusions (b), (c) and (d) with some caution, our data at least justify a skeptical attitude towards utilization of current ideas regarding interpretation of *FM* and *m*, as well as the *M* subcategories, pending further validity studies.

4:15 P.M. A comparison between certain Rorschach scoring signs, college freshman orientation test scores, and grade point indices. WESLEY A. DUNN, *Purdue University.*

The Rorschach Psychodiagnostic test was individually administered to 122 male freshmen engineering students at Purdue University during the fall semester of 1950. These subjects were between 17 and 20 years old and were taking approximately the same academic courses. The Rorschachs were given during a 7-week period while the students were earning the grades used as primary criterion for this study. An attempt was made to determine if any of 26 common scoring signs (*W*, *Z*, *M*, *C*, etc.) were related to academic grades or to the Purdue Orientation test scores.

A new statistical procedure, suggested by L. J. Cronbach, was employed to hold the number of Rorschach responses per record constant while measuring the relationship between each different scoring sign and the criterion test scores. This method avoids some of the tenuous assumptions demanded when using straight ratios (*W*%, *A*%, *F* + %, etc.). After making these adjustments the 30 highest and 30 lowest grade point indices were compared with each scoring sign by means of chi-square tests. The same technique was used with scores on the American Council on Education examination (*Q* and *L* scores), and the Purdue Placement Tests in Mathematics, English, and Physical Science. Of the 156 chi-square tests computed the results found were approximately what might be expected by chance. A few of the higher chi squares suggesting possible differences were subjected to further statistical analyses. The results indicate that the 26 signs used were generally not related to grade point indices or to the five orientation test scores. There was a trend suggesting that "movement" in the Rorschach was related to the Purdue

Placement Test in English and the ACE(Q) scores.
(Slides)

4:30 P.M. Evaluation of chiaroscuro determinant of Rorschach test as an indicator of overt anxiety.
MELVIN E. ALLERHAND, *University of Nebraska*.
(Sponsor, Marshall R. Jones)

PROBLEM: To investigate factors which compose the chiaroscuro determinant categorized by Beck, Klopfer, and Binder, and ascertain whether or not any of these are related to an external criterion of overt anxiety.
SUBJECTS: 50 college students who volunteered as Ss for this study.

PROCEDURE: A criterion of overt anxiety was established by submitting a list of behavioral movements, e.g., restlessness and heaving deep sighs, to fifteen experienced clinicians who were asked to state whether or not these signs were indicative of anxiety. Eighty per cent or more agreement on any sign was established as the criterion for the use of the sign in the observations that were subsequently made.

The experiment was performed in two sessions. In the first session the Rorschach, a scale of manifest anxiety, and a "nonconflict" problem-solving test were administered. The subjects were put into an avoidance-avoidance conflict situation in the second session approximately one month later. During both sessions, an observer tabulated the occurrence of overt anxiety signs.

The relationships between the various kinds of chiaroscuro determinants and the totals of the anxiety signs were determined primarily by a correlational technique. The effect of the length of the Rorschach record on the occurrence of the chiaroscuro responses was controlled by a partial correlation technique.
RESULTS AND CONCLUSIONS: The criterion of overt anxiety was shown to be a highly reliable measure. Within the Rorschach, the best over-all predictor of these anxiety signs was the texture type of chiaroscuro determinant resulting in significant partial correlation coefficients between .40 and .60. The chiaroscuro

scores predict the responses during the nonconflict situation better than those occurring during the more stressful session or the amount of increase from the nonconflict to the conflict session. There were high interrelationships between the three Rorschach scoring methods indicating a need for consolidation of some scoring categories.

4:45 P.M. Nationalization of Rorschach research—
A plan for a cooperative research project. IRVING ARTHUR FOSBERG, *VA Hospital, New Orleans, Louisiana*.

Research on the Rorschach test can no longer be adequately carried out by individual workers functioning independently of each other. Thirty years of this type of work have failed to provide the clinician with adequate support. Two reasons are advanced for this state of affairs: (a) An individual research worker collects only 750 records on the average for several years of work, where the variables involved are of the order of 1,230,000,000,000, and (b) Rorschach recording is in a chaotic state such that no two records are strictly comparable. This paper presents a plan for the establishment of a universal scoring system that must be achieved prior to embarking on a cooperative research project that, by enlisting the aid of all of the Rorschach workers, will enable us to collect records of a large enough volume to sample the population more adequately.

The problem of universal scoring will be met by increasing the number and specificity of recording symbols, by carefully checking the contribution of each score to the total descriptive picture and by eliminating the non-contributing scores. The problem of a larger and more complete sample will be met by pooling all the Rorschach records administered by the new method and by making a central pool of records available to all workers. Some of the principles and problems involved in such a project are discussed.
(Slides)

DIVISION OF CONSULTING PSYCHOLOGY

LUNCHEON, BUSINESS MEETING, AND PRESIDENTIAL ADDRESS

12:00 M., Tuesday, Room 260, Mayflower

BERTHA M. LUCKEY, The Consulting Psychologist
and the Good Profession.

ROUND TABLE: REHABILITATION—ITS APPROACH AND SIGNIFICANCE TO PSYCHOLOGY

9:50-11:50 A.M., Thursday, East Room, Mayflower

(Co-sponsored with Divisions 12 and 17, and the
Office of Vocational Rehabilitation.
See Division 12's program.)

DIVISION OF INDUSTRIAL AND BUSINESS PSYCHOLOGY

SYMPOSIUM: INTERNAL COMMUNICATIONS

8:40-10:40 A.M., Monday, Congressional Room,
Stallier

ELEROY L. STROMBERG, Chairman

Participants: F. BRADSHAW, HARLAND N. CISNEY,
J. ELLIOTT JANNEY, and EDWARD T. RANEY.

SYMPOSIUM: PROBLEMS IN INDUSTRY
SUBSIDIZED RESEARCH

11:00-1:00 P.M., Monday, Congressional Room,
Stallier

C. H. LAWSHE, Chairman

Participants: WILSON R. G. BENDER, HAROLD E.
BURTT, LEWIS B. WARD, and WENDELL F. WOOD.

INDUSTRIAL APPLICATIONS RELATED
TO EFFICIENCY

1:40-2:40 P.M., Monday, North Room, Mayflower

ERWIN K. TAYLOR, Chairman

1:40 P.M. Prediction of turnover among clerical
workers. PHILIP H. KRIEDT and MARGUERITE S.
GADEL, *The Prudential Insurance Company, New-
ark, N. J.*

PROBLEM: What are the factors which differentiate
girls who leave clerical jobs after a few months of
employment from those who remain on the job? How
well can such quick turnover be predicted by pre-
employment measures?

PROCEDURE AND RESULTS: At the time of employment
400 high school girl graduates were given a battery
of four clerical speed tests, a vocabulary test, an
arithmetic test, a biographical information blank in-
cluding attitudinal items, and a job preference sheet
on which the respondent indicated the relative im-
portance to her of factors such as pay, security, and
type of work.

After three months 75 of these girls had left to go
to college or to take other jobs. Analysis showed that
these short-service employees differ from those who
stay on the job in that they: (a) more often have
a father whose occupation is professional or mana-
gerial, (b) more often took a college preparatory
course in high school, (c) more often consider the
type of work they do as very important, (d) have
somewhat lower scores on the clerical speed tests
(which are valid predictors of performance on be-
ginning jobs), and (e) have higher scores on the

vocabulary and arithmetic reasoning tests (which are
not valid predictors of job performance).

Using two composite scores, one for the vocabulary
and arithmetic reasoning tests, and another for se-
lected biographical and attitudinal items, a multiple
point biserial correlation with turnover of .53 was
obtained using a procedure suggested by Wherry.

CONCLUSIONS: This study shows the desirability of:
(a) hiring girls for clerical work whose family and
personal background have resulted in aspirations and
interests which can be satisfied by the job, (b) hiring
girls who have aptitudes that can be used on the job.
Such girls are good turnover risks.

1:55 P.M. Visual skills tests and job efficiency. N. C.
KEPHART and JOSEPH TIFFIN, *Purdue University.*

This paper presents data on the problem of the re-
lationship between the vision of industrial employees
as this factor is measured by a commercial battery
of visual skills tests and their success on their jobs.
The Ss were 5,457 industrial employees representing
87 different industrial jobs.

For each S, visual skills test scores with the Ortho-
Rater and some type of measure of job success were
available. A previous study had indicated six groups
into which industrial jobs can be classified on the
basis of the visual skills required and had indicated
the basic visual pattern required by each group. Each
employee was classified according to whether or not
he possessed the visual skills required by his job.
The criterion measure was dichotomized for each job
and each worker again classified according to whether
he was in the "upper" or "lower" criterion group.

For each job the percentage of employees who had
adequate vision and were in the "upper" criterion
group was computed. Similarly the percentage who
had inadequate vision and were in the "upper"
criterion group was computed. The resulting series
of paired percentages was converted to correspond-
ing angles ($\text{Angle} = \text{Arc Sin } \sqrt{\text{Percentage}}$) and
checked for significance of the difference. For all 87
jobs combined there was a difference in percentage
of employees who were in the "upper" criterion classi-
fication in favor of the group whose visual skills were
adequate. The t value of this difference was 8.88
which is significant beyond the .001 per cent level.

2:10 P.M. Effect of word order on readability of
pavement markings. HARRY W. CASE, GORDON N.
BRITTLE, and GEORGE E. MOUNT, *University of
California, Los Angeles.*

At the Institute of Transportation and Traffic En-
gineering, University of California, Los Angeles, a

laboratory experiment was designed to investigate possible differences in reaction to highway pavement signs. These differences were determined for signs presented in a normal vertical reading order, i.e., "first order" signs (example: $\begin{smallmatrix} \text{CROSS} \\ \text{WALK} \end{smallmatrix}$) as compared with "second order" signs (example: $\begin{smallmatrix} \text{WALK} \\ \text{CROSS} \end{smallmatrix}$). Four common pavement markings—SIGNAL AHEAD, PED XING, STOP HERE, and CROSS WALK—were used as key words around which a group of sixteen slides for visual presentation were constructed. Each group consisted of eight presentations of the "key" words, four in the vertical order and four in the inverted order. The eight remaining slides for each group consisted of closely related "mislead" slides presented in the same relationship to assure that the subject would read both words before depressing one of two choice keys.

The slides were photographed so that the words bore the same relationship to the S as a pavement sign would to a driver 27 feet distant from the sign. Twenty-four Ss made a total of 1,536 judgments. Each S had normal vision and possessed a driver's license.

An analysis of variance of the resulting data revealed the following conclusions: 1. The "first order" signs elicit a significantly quicker response than the "second order" signs.

2. The effect of order on a subject's response is a function of the particular sign; therefore, in terms of analyzing order difference, individual signs must be treated separately.

3. Differences in response time due to the subject overshadow the differences due to both sign and order.

4. It appears that response times are the shortest in cases in which the sign has an established meaning in normal communication.

5. From the results obtained for PED XING it is indicated that there is no difference in the degree of meaning as a function of order for a sign composed of word abbreviations. (Slides)

2:25 P.M. Reliability of group ratings as a function of number of scale categories and amount of verbal anchoring of the scale. J. B. HUGHES II and A. W. BENDIG, *University of Pittsburgh*. (Sponsor, A. W. Bendig)

PROBLEM: Little empirical evidence is available on the influence of the number of categories on a rating scale or the amount of verbal anchoring or definition of the scale categories upon the reliability of group judgments. The present research was concerned with the influence of these two variables upon the reliability of group self-ratings.

PROCEDURE: Fifteen different rating scales resulting from the combination of five numbers of categories

(3, 5, 7, 9, and 11) and three degrees of verbal anchoring of categories (center category defined, end categories defined, and both center and end categories verbally defined) were constructed. The stimuli were the names of twelve foreign countries and subjects were asked to rate themselves on the amount of their knowledge about each foreign country. The raters were 225 college students in introductory and social psychology courses. Each of the scales was used by 15 raters. The reliability of the summed ratings of the stimuli was estimated by Hoyt's analysis of variance procedure. Reliabilities were computed for randomly selected groups of five raters, groups of 15 raters, and (combining the anchor groups) groups of 45 raters. RESULTS: The mean reliability of summed ratings for five raters was 0.67; for 15 raters it was 0.87; and for 45 raters was 0.95. Group reliability was relatively constant for scales with 3 to 9 categories, but dropped appreciably at 11 categories. This decrement at 11 was consistent regardless of number of raters. Group reliability increased slightly with increasing amounts of verbal anchoring.

CONCLUSIONS: The reliability of group self-ratings is relatively constant when 3 to 9 scale categories are used, but begins to decrease with further refinement of the scale. Increased verbal definition of the categories tends to increase somewhat group rating reliability.

APPLICATION OF TECHNIQUES AND PRINCIPLES

2:50-3:50 P.M., Monday, North Room, Mayflower

GEORGE K. BENNETT, Chairman

2:50 P.M., Opinion weighting of job factors. EDWARD B. GREENE, *Wayne University*.

PROBLEM: To discover and compare the weights assigned to job factors among four categories of occupations by various groups, and to determine the significance of such weights in evaluating a group of jobs.

PROCEDURE: After some training judges rated 19 job factors by number as follows: 0 for not needed, 1 for somewhat important, 2 for very important, and 3 for extremely important. Each judge independently made ratings for groups of (a) clerical positions, (b) shop, (c) sales, and (d) first-line foremen in a factory.

SUBJECTS: There were three groups of judges. Group I, 16 employment officers in factory work, Group II, 14 men in office personnel work, and Group III, 31 graduate students in classes in Job Analysis at Wayne University, School of Business Administration.

RESULTS AND CONCLUSIONS: 1. Fairly stable relative weights for job variables appeared in the reported

procedures. No significant differences were found among the three groups of judges.

2. The judges gave more weight to mental abilities than to either physical characteristics or adjustments required.

3. The weights for groups of clerical, sales, and supervisory jobs were very similar, but different from weights given to the group of shop jobs. The shop jobs had greater relative weights for spatial thinking, inspection, working conditions and hazards, responsibility for equipment, strength, agility, and dexterity; and smaller relative weights for language, reasoning, special knowledge, voice, and appearance.

4. An empirical check showed that the different weights for shop and sales occupations yielded nearly the same ranks in evaluating 30 office occupations. This was because the factors were not independent, and some of the variables with the largest weights did not have much variance in this group of positions.

5. Further study is needed since the number of judges was small and the rating scale used may have affected the size of the relative weights.

3:05 P.M. The use of mark-sensing methods in data collection. V. M. TYE and J. A. PARRISH, *Personnel Research Section, AGO, Department of the Army*.

PROBLEM: To determine the feasibility of data collection at field installations and recording information from permanent records by use of mark-sensing methods.

PROCEDURE: A procedure was devised and utilized, involving greatly increased efficiency in the coordination of the two phases of research; collection of data and its analysis. The process may be outlined as follows: (a) a special mark-sensing IBM card was prepared in PRS for each man for whom information was desired, by punching identifying information into the card, (b) the cards were processed through the IBM "interpreter," so that punched identifying information was printed at the top of each card, (c) cards were then sent to the Army installation, along with a detailed SOP, where field personnel recorded required data directly upon the cards by marking in appropriate spaces with special electrographic pens (the use of a pen with electrographic ink assured a positive and permanent record for mark-sensed punching), (d) when cards were returned to PRS, the IBM reproducer rapidly and automatically transferred information recorded as in ink marks into the proper punched holes.

RESULTS: The data were then available in punched cards form for rapid and efficient analysis through use of the various tabulating equipment. This procedure makes the process of transferring information

to punch card forms, automatic, accurate, and rapid. Field personnel reported that their part of the job (recording of data) was easily accomplished with the mark-sensing cards. Difficulties found in the erasing were circumvented by the use of duplicate cards. The final record in the punch card, in this method, is as accurate as the initial clerical recording of the data. In addition, the method represents an over-all saving of man-hours, both in the field and in PRS research analysis.

Suggestions are made for additional uses of mark-sensing methods in personnel research.

3:20 P.M. People selection: A technique for grouping a minimum number of people to maximally predict a person-prototype. ROBERT PERLOFF, *Personnel Research Section, AGO, Department of the Army*.

PROBLEM: The need for supervisor-worker and worker-worker harmony becomes acutely pressing when comparatively small groups of people are required, by the nature of their work, to do their jobs as a team, especially when the unavoidable propinquity of team members is apt to elicit psychological friction and a reduction of productive efficiency. Furthermore, the selection of individuals for team belongingness may become increasingly important as greater mechanization of production requires fewer and fewer workers. It would appear that under these conditions, and in a specialized labor market where positions are exceeded by applicants, human relation research might profitably exploit a people-selection modification of the Wherry-Doolittle test-selection technique. It is proposed that the Wherry-Doolittle method be adapted to this human relations problem, for the grouping of a minimum number of people, rather than tests, to maximally predict a person prototype or prototypes.

An important difference between the mechanics of people-selection versus test-selection is the nature of the zero-order correlation coefficients: in people-selection these correlations are between people variables, rather than between test variables. This suggests a couple of serious, though not necessarily insurmountable, difficulties. The first of these is the need for sample size (tests) to be considerably larger than the number of variables (people). Perhaps this problem could be handled by using carefully selected items, rather than tests, from a battery of heterogeneous tests. A second major difficulty is the matter of generalization, the heart of the conventional Wherry-Doolittle concept. That is, what is the nature of the criteria on which subsequent samples of job applicants would be selected? Sufficient information would have to be available about the people-variables in the validation-samples so that comparable people could

replace either the team as a whole or individual team members.

3:35 P.M. Toward a perspective for industrial psychologists. GUY E. BUCKINGHAM, *Allegheny College*.

An attempt to focus the literary, ethical, and legal factors on the problem of defining the function of the industrial psychologist; the relating of the destructive literary criticism of the early nineteen hundreds; the ethics of more equitable distribution of products and services and the legal concept of the "right to experiment socially" to the problems thus created and the developing science of psychology; the attempts of psychologists to borrow methods of thought from the so-called more exact sciences; the trend toward the part-specialty concept of the doctorate in psychology; and the parallel attempts to apply psychology to the various facets of individual and group living.

The social blame of the business man; is it causal or symptomatic? With no cultural precedents from the east to guide him, did social blame prove him insincere or just feeling guilty about his incompetence socially? Did mass production give him a problem of distribution in terms of wages which no culture in the past had faced? Were his reactions partially successful socially?

When the populus began to participate in the results of mass production and when travel, advertising, and communication in general developed, did both the manager and the employee become suspicious of each other to the point of generating unhealthy mental working relationships?

As the result of a rather long argument about these problems with the founder of the Armco Steel Corporation, the author has been working fourteen years trying to help connect the findings of the university psychological laboratory with the front line operations in the Armco Steel Corporation as they involve personal relations. He has tried to help in the development of a way of thinking about the problem, in the guidance of several projects, and in the setting up of twelve hypotheses which seem to define a perspective of the field.

SYMPOSIUM: BELIEVABILITY OF ADVERTISING

8:40-10:40 A.M., Tuesday, Chinese Room, Mayflower

C. N. ALLEN, Chairman

Participants: STEUART HENDERSON BRITT, ALBERT D. FREIBERG, and D. B. LUCAS.

SUPERVISOR AND EMPLOYEE TRAINING AND ATTITUDES

1:40-2:40 P.M., Tuesday, North Room, Mayflower

C. H. LAWSHE, Chairman

1:40 P.M. An investigation of the shape of learning curves for industrial motor tasks. JEAN GROVE TAYLOR and PATRICIA CAIN SMITH, *Aetna Life and Affiliated Companies and Cornell University*. (Sponsor, Patricia Cain Smith)

PROBLEM: To determine whether industrial learning curves, obtained under similar incentive and training conditions, from jobs of varying complexity and with different adjustive requirements, are similar in shape and rate of acceleration.

SUBJECTS: Main study: 43 inexperienced workers on six clearly different operations on specialized power sewing machines. Check study: 27 additional learners on six other operations. Payment plan: learners' bonus plan, succeeded by piece rate.

PROCEDURE: Main study: criterion of learning was established at beginning of period of initial leveling. This time, which could be determined reliably by inspection, varied from 7 to 27 weeks. A modified Vincent method was used to permit comparison and combination of curves at equivalent levels of proficiency. Composite curves were constructed for each job and for all jobs combined. Check study: Identical procedure was followed. Individual, job, and composite curves were compared with those of main study. RESULTS AND CONCLUSIONS: 1. Jobs and individuals differed in median time required to reach the criterion and also in productivity at that time.

2. When height and length of total curves were equated, neither median scores nor ranges differed for any portion of the twelve learning curves.

3. Differences in complexity and adjustive requirements of these tasks were related to differences in learning time, but not to differences in shape or slope of the learning curves.

4. The composite learning curve based on the six tasks of the main study matched very closely the composite curve of the check study.

5. One negatively accelerated curve could serve as the "typical" curve for all these tasks. (Slides)

1:55 P.M. Supervisory training and employee attitudes. THEODORE R. LINDBOM, *Midland Cooperative Wholesale*.

PROBLEM: To evaluate the effect of a supervisory training program through before-and-after measurement of employee attitudes.

SUBJECTS: 50 supervisors and executives and 129 home office employees of a small insurance company.

PROCEDURE: Attitudes of employees were measured using an objective self-administering attitude questionnaire one week before the start of and three months after the conclusion of a 16-week supervisory training program. The training program dealt largely with the personnel functions of the supervisor's job. A variety of training methods, all designed to bring about active participation of the group, were used including the conference method, role playing, and sound film strips.

RESULTS: Attitudes of employees toward the company, communications, co-workers, supervision, and type of work were significantly more favorable after the supervisory training program. Female employees made greater gains in attitude scores than male employees. Employees with less than a year of service made greater gains in attitude scores than employees with a year or more of service.

CONCLUSIONS: The supervisory training program was successful according to the criterion used. The technique of evaluating supervisory training through measurement of employee attitudes appears to be a useful one.

2:10 P.M. What 400 manufacturing employees in four widely separated plants stated are the most desirable characteristics in supervisors. DONALD H. DIETRICH and ROY A. DOTY, *George Fry & Associates*.

PROBLEM: To determine what manufacturing employees think are the most desirable and undesirable characteristics in supervisors.

SUBJECTS: 400 manufacturing employees in four widely separated plant locations.

PROCEDURE: Intelligence tests and interest and personality inventories were given to each of the 400 employees. Additional data about their family background, education, work history, and personality characteristics were obtained in an hour interview.

RESULTS AND CONCLUSIONS: Irrespective of job classification, geographic location, age, educational background, work experience, intellectual level, pattern of interests or personality characteristics, manufacturing employees stated that the three most desirable characteristics in supervisors were:

1. Ability to get along with others,
 2. Technical knowledge,
 3. Fair play, principally nonfavoritism,
- and the most hurtful or undesirable characteristics in supervisors were:

1. Inability to get along with others,
 2. Lack of technical knowledge,
 3. Injustice or favoritism.
- In view of the above, and the additional finding that supervisors usually have the necessary technical skills and/or knowledge but are frequently limited in the

ability to gain the respect and cooperation of their subordinates, their fellow supervisors, and their superiors, it is suggested that in the selection and training of supervisors greater attention be given to the social and emotional development of the individual. (Slides)

2:25 P.M. The application of action-research methods to the development of an industrial conference program. JEREMY A. SARCHET and CHARLES W. NELSON, *University of Chicago*.

This paper reports on the use of social science research methods to improve the selection and training of industrial conference leaders and to improve the materials they use.

The report is based on experiences with conference series in seven different companies. As each series was analyzed, the insights were used to improve the next series of conferences. Progress is charted in four general areas: (a) Selection of the conference leader and conception of his role, (b) Conference leader training, (c) Printed resource materials, and (d) Performance in actual conferences.

The Leadership Attitude Scale shows scores which indicate increasing acceptance of a human relations point of view on the part of successive conference leader groups.

These experiences contributed to plans for an integrated program of development for a small manufacturing plant. These plans are described at the end of the paper. (Slides)

EMPLOYEE SELECTION

2:50-3:50 P.M., Tuesday, North Room, Mayflower

F. R. WICKERT, Chairman

2:50 P.M. Critique on clerical testing. EDWARD N. HAY, *Edward N. Hay & Associates, Inc., Philadelphia*.

Reports on clerical testing have been extensive over the years, yet there is no general agreement on the subject.

In business, most new employees are hired for very simple clerical tasks. Selection for complex clerical tasks is specific to the particular situation and is not the subject of this discussion. Learning a task is not the same as performing it and therefore is not the proper criterion for simple clerical work.

There is little agreement as to the best content for clerical tests. The most efficient measure, by far, is speed of perception. This usually involves comparison or cancellation of differences. It can be effectively supplemented by short span memory and by a speeded test of number series completion and perhaps by other functions.

Many test constructors mistakenly have used less efficient functions, such as mental ability items, vocabulary, spelling, arithmetical reasoning, arithmetical computations, dotting, tapping.

Test constructors usually have ignored the businessman's insistence on economy and have designed tests which require 30 to 75 minutes for administration. This is prohibitive. Furthermore, certain tests have demonstrated that 5 to 15 minutes is enough in which to predict with validities equal to or even higher than those of longer tests. The best clerical tests give validity coefficients of .60 and higher.

Any clerical test battery, before it is offered for public sale, should be repeatedly validated and the optimal multiple cutting scores determined according to the supply of labor available.

The ideal test battery for clerical prediction will be based mainly on speed of perception. Increases in validity will be obtained if the test embodies or is supplemented by tasks which employ short span memory and speeded number series completion. It is possible also to design the test in a coding or classifying form.

If information is desired on the candidate's ability to use arithmetic, on skill with words, or on promotability, then tests for these purposes should be added to the battery but not substituted for the basic test of speed of perception.

3:05 P.M. Some generalizations concerning the validity of aptitude tests. EDWIN E. GHISELLI and CLARENCE W. BROWN, *University of California, Berkeley*.

During the past half century numerous studies have been made of the effectiveness of aptitude tests in the prediction of occupational proficiency. However, there is no adequate summary of the findings, and the purpose of the present paper is to integrate the available data so that better generalizations can be made concerning the validity of various types of tests. Both tests and jobs were classified into types. For each type of test applied to each type of job the average validity coefficient was computed from the reported findings. Since certain consistencies were noted between the validity coefficients for various types of tests, coefficients of correlation were computed between tests using validity coefficients as scores and jobs as individuals. The resultant correlation matrix was analyzed by means of Tryon's procedure of cluster analysis. It was found that three major groups or domains of tests emerged; intellectual tests, spatial tests, and motor tests. For every job a score was computed in each of the three test domains. These scores are presented as indices of the relative validities of the three types of aptitude tests for the various jobs.

3:20 P.M. Desirable content of letters of recommendation. ROBERT B. SLEIGHT and GRACE DUVOISIN, *Johns Hopkins University*. (Sponsor, Robert B. Sleight)

In selecting high level personnel, neither tests, nor interviews, nor any other selective devices are so highly valid that one can discount the potential value of letters of recommendation. Letters of recommendation are often unsatisfactory because of a lack of understanding on the part of the writer as to what information should be included.

PROBLEM: Our specific problem was to survey employers to learn what kind of information they thought should be included in letters of recommendation for professional and managerial level personnel.

SUBJECTS: A questionnaire was sent to 297 executives and personnel men, and a 50 per cent return was received.

PROCEDURE: Twenty-seven items were selected from sample rating forms and letters of recommendation. Those responding rated each item on a graphic scale ranging from "should definitely be included" to "should definitely not be included." In addition, a series of questions related to the problem of writing letters of recommendation was asked and general comments were invited.

RESULTS: Median rating of importance was determined for each item, and a list of suggested topics for inclusion in letters of recommendation was compiled from these ratings. Among the items rated most important for inclusion in letters of recommendation were: cooperativeness, honesty, initiative, quality of work, and social adjustment. The items which were deemed desirable for inclusion in letters of recommendation might also be adapted to patterned personal contacts or telephone checks in order to assure that salient points are covered. General comments of persons replying to the questionnaire are also summarized.

3:35 P.M. The agreement among replies to an employment recommendation questionnaire. JAMES N. MOSEL and HOWARD W. GOHEEN, *George Washington University and U. S. Civil Service Commission*.

PROBLEM: To determine the inter-respondent reliability of personal references in evaluating job applicants by means of a mailed employment recommendation questionnaire.

POPULATION: 2,800 employment recommendations on 904 applicants for nine civil service jobs.

PROCEDURE: The employment recommendation questionnaire required the respondent to rate the applicant on a number of skills, knowledges, and personality traits which were considered as related to job success. There were about three recommendations

per applicant, all from references mentioned in the application for employment. The number of rating factors varied from 5 to 39 depending upon the job. Intra-class correlation was used as a measure of the amount of respondent agreement.

RESULTS: The factors rated ranged in reliabilities from .01 to .98, but in most cases were very low, 80 per cent being less than .40. The per cent of coefficients of .40 or greater for each job was: storekeeper: 60%; chemist: 74%; accountant and auditor: 10%; information specialist: 12%; organization and methods examiner: 2%; budget examiner: 16%; administrative officer (personnel): zero; economist: 16%; intelligence specialist: 20%. A wide range of reliabilities existed within the questionnaire for any single job; even the better questionnaires contained sufficient number of unreliable items to warrant considerable improvement. When appearing in different questionnaires, the same rating factors frequently showed different reliabilities. Thus the reliability of a rating factor depends to some extent upon the job, and a rating is not necessarily reliable for one job simply because it has proven reliable for another job.

Hypotheses concerning the causes of low reliability are suggested and the implications of these results for using employment recommendation questionnaires are discussed.

BUSINESS MEETING

5:00 P.M., Tuesday, Pan-American Room, Statler

MARION A. BILLS, President

DINNER AND PRESIDENTIAL ADDRESS

7:00 P.M., Tuesday, Federal Room, Statler

MARION A. BILLS. Our Expanding Responsibilities.

SYMPOSIUM: TRAINING IN INDUSTRY

8:40-10:40 A.M., Wednesday, Federal Room, Statler

WILLIAM McGEHEE, Chairman

Participants: WALTER R. MAHLER, HOWARD P. MOLD, J. J. RAY, ANDREW A. TAAFFE, and MACELDIN TRAWICK.

SYMPOSIUM: THE CAUSES AND PREVENTION OF INDUSTRIAL ACCIDENTS

8:40-10:40 A.M., Thursday, Pan-American Room, Mayflower

EDWARD B. GREENE, Chairman

Participants: CLARKE W. CRANNELL, EDWIN E. GHISELLI, WILLARD A. KERR, ALEXANDER MINTZ, JOSEPH TIFFIN, ARTHUR WEIDER, and CLARK L. WILSON.

SYMPOSIUM: PSYCHOLOGICAL PROBLEMS IN HIGHWAY TRAFFIC RESEARCH

10:50-12:50 P.M., Thursday, Pan-American Room, Statler

T. W. FORBES, Chairman

Participants: EARL ALLGAIER, ROBERT BRENNER, HARRY W. CASE, A. R. LAUER, ROSS A. McFARLAND, D. J. MOFFIE, and J. E. UHLANER.

SYMPOSIUM: GROUP ORGANIZATION AND JOB PERFORMANCE

2:50-4:50 P.M., Thursday, Pan-American Room, Mayflower

MARION A. BILLS, Chairman

Participants: GEORGE C. HOMANS, F. L. W. RICHARDSON, JR., HERBERT A. SHEPARD, and CHARLES N. WALKER.

SYMPOSIUM: EVALUATING ORGANIZATIONAL EFFECTIVENESS

8:40-10:40 A.M., Friday, South American Room, Statler

IRVING R. WESCHLER, Chairman

Participants: HAROLD A. EDGERTON, DAVID BENDEL HERTZ, ALFRED J. MARROW, and ROBERT N. McMURRY.

SYMPOSIUM: EVALUATING EMPLOYEE PERFORMANCE

10:50-12:50 P.M., Friday, South American Room, Statler

REIGN H. BITTNER, Chairman

Participants: BERNARD J. COVNER, STEPHEN HABBE, E. R. HENRY, and ARTHUR R. LANEY, JR.

SYMPOSIUM: CONDUCTING ACTION RESEARCH

2:50-4:50 P.M., Friday, South American Room, Statler

BRENT BAXTER, Chairman

Participants: STUART W. COOK, JOHN R. P. FRENCH, JR., JOHN W. MACMILLAN, and JAMES C. WORTHY.

SYMPOSIUM: PERSONALITY TESTING IN INDUSTRY

8:40-10:40 A.M., Saturday, South American Room,
Statler

MICHAEL ERDÉLYI, Chairman

Participants: CHESTER E. EVANS, ALBERT K. KURTZ,
GREYDON M. WORBOIS, and R. E. WORTHINGTON.

Discussant: L. N. LASEAU.

SYMPOSIUM: THE INTERVIEW—A SCREENING AND SELECTION METHOD

10:50-12:50 P.M., Saturday, South American Room,
Statler

W. J. E. CRISSY, Chairman

Participants: BENJAMIN BALINSKY, MARION A.
BILLS, HAROLD C. CASH, JAY L. OTIS, and
HILTON N. WASSERMAN.

DIVISION OF EDUCATIONAL PSYCHOLOGY

SPEECH PROBLEMS OF SCHOOL CHILDREN

9:00-11:45 A.M. and 1:30-4:30 P.M., Sunday,
South American Room, Statler

(Co-sponsored with Division 16, National Society for
Crippled Children and Adults, and American
Speech and Hearing Association.
See Division 16's program.)

ACCOUNTING FOR VARIANCE IN EDUCATIONAL ACHIEVEMENT

8:40-9:40 A.M., Monday, Pan-American Room,
Statler

H. H. REMMERS, Chairman

8:40 A.M. Measurement of writing ability at the
college-entrance level. EDITH M. HUDDLESTON,
Educational Testing Service.

Two complementary studies were designed to compare the effectiveness of objective and subjective testing techniques in measuring ability in English composition. The two studies were planned in such a way that the results of the second supplemented the results of the first and provided a means of cross-validation. A verbal test, an objective English test, a paragraph-revision exercise, and free essays were employed. In Study I sixteen college-freshman English classes were used as subjects, and 763 secondary school seniors were used in Study II. Teachers' rank-order ratings of ability to write, based on conferences with the teachers, constituted the principal criterion in each study; as a secondary criterion, course grades in English were employed. Intercorrelations among all variables were obtained, and multiple correlations of predictor variables with criterion variables were computed.

The essays demonstrated unsatisfactory reliability

and markedly lower correlations with the criteria than were shown either by the verbal test or by the objective English test. Paragraph-revision was the least satisfactory predictor, although more reliable than the essays. While all predictor variables appeared to be primarily verbal in nature, the traditional verbal test demonstrated the highest validity with respect to both criteria.

8:55 A.M. The construction of a personality scale to predict academic achievement in introductory psychology courses. HARRISON G. GOUGH, *University of California.*

The immediate aim of this project was to determine whether a brief and reliable personality scale could be developed which would predict course grades in undergraduate psychology classes. The broader aim of the project was to identify the particular opinions and self-conceptions relating to course achievement, and to compare them with findings in similar studies of high school and graduate school achievement.

Four original samples (Total $N = 603$) from three universities were used in constructing the scale, and five cross-validating samples (Total $N = 684$) were used in checking it.

The procedure employed was to analyze empirically a special pool of criterion-specific items. Some of the items were drawn from previous studies, and others were written especially for this project. In selecting and writing items, an attempt was made to capitalize as fully as possible on previous findings, on personality theory about effective functioning, and on subjective impressions and intuition. Each item in the pool was then submitted to empirical test, and those revealing significant validities in all of the original samples were retained for the scale.

A 36-item true-false scale was developed which yielded correlations with course grades of .57, .47, .44, and .42 in the original samples, and of .58, .35,

.31, .31, and .26 in the check samples. The scale's content is exemplified by the following two items: (1) "People pretend to care more about one another than they really do"; and (2) "The future is too uncertain for a person to make serious plans."

The items in the scale and the pattern of the scale's correlations with other variables both suggest that higher scores on the scale are predictive of positive, favorable personality characteristics, as well as of superior scholastic performance. (Slides)

9:10 A.M. The relation of vocabulary test-retest gains to amount of college attendance after a twenty-four year period. EDWARD O. SWANSON, *Educational Testing Service.*

PROBLEM: To study the relationship of test-retest gain of high ability high school graduates to amount of college education.

SUBJECTS: A high ability group of male high school graduates leaving Minneapolis and St. Paul high schools in the years 1926 through 1928. All were at or above the 80th percentile with respect to the average of high school rank and college aptitude test rank.

METHOD: One hundred and twenty-four of these were still located in the Twin City area, and 94 of them were interviewed. Of these, 72 had taken the Minnesota College Aptitude Test in their senior year of high school. The test is for 50 minutes and consists of completions, synonyms, and antonyms. Fifty-five of the 72 consented to be retested. Twenty had not attended college (Group I); 13 attended but did not graduate (Group II); and 22 graduated from college (Group III). The groups were found not to differ significantly in means and variance on original scores. Gains for the test-retest scores were then computed. RESULTS: Mean gains for the three groups were respectively 7.25, 9.38, and 35.30. Analysis of variance on the mean gains resulted in an F significant beyond the 1% level.

CONCLUSION: Amount of education after high school graduation has a significant positive relation to test-retest gains on a vocabulary test. However, the study does not show whether this is a gain made during college years and maintained, or if the experience of college has stimulated activities which have in turn led to the gain.

9:25 A.M. The investigation, through the use of projective techniques, of nonintellectual factors in the learning of mathematics. ISAIAH ROCHLIN, *University of Chicago.*

PROBLEM: The use of a variety of aptitude measures to predict achievement in mathematics has proven only moderately satisfactory. This study undertook an

exploration of certain nonintellectual factors which might be associated with underachievement and/or overachievement in the general course in mathematics at the College of the University of Chicago.

SUBJECTS: 58 students, enrolled in mathematics, divided into two major groups: (a) underachievers and their controls; (b) overachievers and their controls.

PROCEDURE: Sentence completion and thematic apperception tests, designed for this study, were pre-tested and group-administered to all students entering the course. The group Rorschach and a battery of Primary Mental Abilities tests were also administered. Underachievers were defined as those who were above Q_1 in the distribution of the PMA scores and below Q_1 in the achievement score distribution; overachievers were below Q_1 in the PMA distribution and above Q_1 in the achievement distribution. Control groups were above Q_1 or below Q_1 respectively, in both distributions. On the basis of the projective test data, ratings were assigned to experimental and control subjects on 43 variables characterizing their fantasy productions. Chi square, corrected for continuity in all appropriate cases, was computed to test significance.

RESULTS: Differences between experimental Ss and their respective controls in the following areas were statistically significant: flexibility and confidence in noninterpersonal activity; use of deductive and intuitive approaches; inclusion of abstract considerations; persistence in the face of obstacles; adequacy feelings in relations with instructors; presence of conflict concerning acknowledged inadequacy; rejectiveness toward others; outcomes expected for self and peers; liking for and confidence about ability in mathematics. Nonsignificant results, including several suggestive of differential trends, were obtained in such areas as affiliativeness; confidence in peer relations; sources of evaluation and behavior-determination; flexibility in interpersonal relations; and tendency to seek help. (Slides)

TEACHER PERSONNEL

9:50-10:50 A.M., Monday, Pan-American Room, Statler

T. ERNEST NEWLAND, Chairman

9:50 A.M. The use of a drawing technique for studying learning during teacher training. WILLIAM RABINOWITZ and ROBERT M. W. TRAVERS, *Board of Higher Education, New York City.*

A drawing test was developed which required the subject to "Draw a Teacher with a Class" in order to explore the ideas acquired by education students

during teacher training. This technique provided a means of exploring the concept of teaching which the student brought with him to the training program and of studying changes that occurred in this concept during professional training. Data derived from two teacher training programs, which differed substantially both in their methods of training and in the kinds of teachers they were designed to produce, showed substantial differences in the concepts of teaching developed in the students. In Program A which emphasized academic classwork as a basis for teacher training little changes were apparent in the drawings produced by students as teacher training progressed. In Program B on the other hand, which emphasized visitation of selected teachers and participation in the work of the classroom, major changes were noted in ratings of various aspects of the drawings. (Slides)

10:05 A.M. The use of tests and other objective data in the selection of camp counselors. HARRY B. GILBERT, *New York University and Camp Merrimac, Contoocook, N. H.*

PROBLEM: This study represents an attempt to discover the extent of the relationship between certain characteristics of camp counselors and their performance on the job. It is essentially an application of personnel selection research to the area of camp counseling in which it has hitherto not been reported as employed.

SUBJECTS: 153 male camp counselors in seven different organizational camps for boys in New York, New Jersey, and Pennsylvania were studied. Only cabin counselors were included.

PROCEDURE: In June or early July, each camp was visited and the following battery of tests was administered: Wesman Personnel Classification Test, Form A, Bennett Mechanical Comprehension Test, Form AA, The Minnesota Personality Scale for Men, and a brief experimental edition of a specially devised Counselor Mental Hygiene Test. Counselors also completed a background data questionnaire. Two measures of performance were obtained to serve as criteria of success—a ten-point director rating scale and an application of the nominating technique.

To study the validity of the predictive data, the following procedures were employed: correlational, comparison of means of best and worst counselors, and the multiple cutoff.

RESULTS: Most of the obtained correlations with director nominations were low and not significantly greater than zero. Biserial correlations with nominating technique criteria were in the 20's and 30's, except for the personality test which was close to zero. Comparison of means of best and worst counselors re-

vealed significant differences in intelligence, mechanical comprehension and counselor mental hygiene test scores, age and years of schooling. The multiple cutoff technique was demonstrated to be useful with cutting scores on the Wesman and Bennett tests, age and years of schooling. Certain limitations of the data, particularly with regard to intercamp variability necessitate cautious experimental adoption of the proposed procedures.

10:20 A.M. Determining students' concepts of effective teaching from their ratings of instructors. WILLIAM E. COFFMAN, *Educational Testing Service.*

PROBLEM: Critics of the use of student ratings of instructors usually emphasize the limitations of student judgments in determining teaching effectiveness. Proponents emphasize the importance of having information concerning student reactions because effective learning requires interaction of teacher and student. An over-all student rating suffers from lack of definition. The use of multiple scales results in difficulty of interpretation. The study represents an attempt to provide a simplified description of student values reflected in their ratings of instructors on a multiple scale.

SUBJECTS: 2,000 students and 55 instructors in the School of Arts and Sciences, Oklahoma A. and M. College.

PROCEDURE: Students rated instructors using the Oklahoma A. and M. Rating Scale for Teachers. The scale consists of eighteen specific traits followed by an over-all rating. The intercorrelations of the nineteen scales provided the basis for a centroid factor analysis. Four centroid factors account for the reliable variance of the over-all rating. An oblique rotation resulted in structure suitable for interpretation.

RESULTS: The four factors were identified as: (I) empathy (the degree of understanding of and sympathy for the student and his problems); (II) organization (the extent to which the instructor structures the learning situation); (III) the academic stereotype (the degree to which the instructor is "the absent-minded professor"); and (IV) verbal communication. The over-all rating had a high loading on Factor I, a relatively high loading on Factors II and IV, and an insignificant loading on Factor III.

CONCLUSIONS: Students' concepts are generally defensible although limited in scope. The technique provides a check on values expressed in response to direct questioning. The results suggest certain changes in the scale to reduce ambiguity. Instructors are challenged to assume responsibility for leading students to a broader concept of the teaching process.

10:35 A.M. Relationships between Rorschach performance and student teaching. MARTHA G. HESSEL and ROBERT M. W. TRAVERS, *College of the City of New York*.

PROBLEM: The purpose of this study was to determine if there were patterns on the Rorschach which had consistent relationships with supervisors' descriptions of the characteristics of students of education in a student teaching situation.

SUBJECT: 64 individuals, 39 students in elementary education and 25 in secondary education, all candidates for student teaching.

PROCEDURE: The individual Rorschach was administered by one examiner to all subjects. Scoring was done at the completion of all testing. Supervisors wrote descriptions of the outstanding characteristics of these individuals in the student teaching situation. The descriptions of the elementary education students were divided into two categories, one of which included behavior or traits considered desirable by the supervisors and the other, those considered undesirable. These two categories were related to the numerical adjustment score derived from the Revised Munroe Inspection Technique, as well as to possession of a triad of Rorschach ratios, obtained by clinical analysis. Examination of the relationship between Rorschach patterns and performance in student teaching was also made for the secondary education students.

RESULTS: No relationship was found between numerical adjustment scores and supervisors' descriptions of performance for the elementary education students. However, desirable behavior was found to be associated with a triad of Rorschach ratios (chi square 9.14, significant at the 0.01 level of confidence). The triad of ratios indicated a driving, extratensive, emotionally labile orientation which seemed to be what the supervisors preferred in their students. Cross-validation on a similar population is of course needed. No relationship was found between Rorschachs and descriptions of behavior for the secondary education students. Certain questions were raised about the use of the Rorschach in studies of cooperating groups and the validity of the usual interpretations, especially those related to concepts of adjustment.

MEASURING COMPLEX PROCESSES

11:00-12:00 M., Monday, Pan-American Room, Statler

N. L. GAGE, Chairman

11:00 A.M. The high school student's concept of citizenship behavior. BERNARD CORMAN, *Teachers College, Columbia University*.

If citizenship education is to be improved, a clear statement of the students' concepts of citizenship is needed. Students in 14 high schools, from all parts of the country, were asked: "Think of some adult in your community who seems to you to be an excellent citizen. Now think of something this person has done recently which leads you to classify him or her as an excellent citizen. Please describe what this person did." A similar question was asked about a "very poor citizen." A categorization was made of the response in terms of the incidents cited. Coders agreed in their placement of such incidents in 87% of all such placements. The tabulation shows: (a) The concept of what constitutes citizenship behavior is vague. Students have difficulty citing specific behaviors. (b) Students think of citizenship in terms of self-related behaviors. They cite adults who do something for young people. (c) Students think of citizenship in terms of "good" and "bad fellows." (d) Students tend to pick adults who conform with accepted social standards and stereotypes. (e) Students do not, with the exception of voting, relate citizenship to individual participation in the processes of government. Conclusions which follow from the study are: (a) Provision for practice in the skills of citizenship is required. (b) A relationship must be established between citizenship behavior and the day-to-day activities of those with whom students have contact. (c) A greater emphasis on the political character of citizenship is required.

11:15 A.M. A comparison of profiles of learning from instructional films. LORAN C. TWYFORD, *Special Devices Center, ONR*.

The amount of learning from a film for successive intervals of time varies as the content changes in density, difficulty, and previous experience of the learner. A profile of learning is a line graph showing how much learning has occurred during each segment of the instructional program. Strong and weak parts of the film can be located by employing profile methodology.

Twenty-two profiles were obtained by testing 276 high-school and college students using two general methods. Twelve test profiles were constructed by exhaustively testing the film content using two forms of a true-false test and distributing the learning on the time axis. Ten rating profiles were constructed by summing the responses to the film content of forty subjects who made ratings on a five-point scale. Ratings were electrically recorded as the film was being shown by means of the Film Analyzer. Inter-correlations between the profiles were obtained after correcting for "lag," "carry-over," and "drift"; these factors were found to distort rating profiles.

RESULTS AND CONCLUSIONS: A profile obtained by making ratings on the scale "I am learning" correlated .53 with a criterion profile obtained by using objective tests. The like-dislike profiles had a low negative correlation with the criterion. Prediction of learning for classmates correlated with the criterion to the extent of .20 during the first showing and .39 during the second showing. This research suggests that strong and weak points in an instructional program can be differentiated by obtaining audience ratings on a scale of the type "I am learning." (Slides)

11:30 A.M. The effect of different problem structures on the difficulty of problems. BENJAMIN S. BLOOM, *University of Chicago*.

One of the major difficulties in investigations of problem solving is the lack of a thorough understanding of the nature of the problems used and the effect of various versions of the same problem. Koffka has suggested that a study of the form of puzzles could contribute as much to an understanding of problem solving as the study of illusions has contributed to the understanding of perception.

Problems and puzzles posed in different ways were given to random groups of college and secondary school populations. These were posed in three forms: one form with leading clues, another form with misleading clues, and a third where the essential problem was posed with a minimum of detail and extraneous material. The varying difficulty of the different forms is compared, and the nature of leading and misleading clues and suggestions is analyzed. The effect of the clues on groups of individuals with different problem-solving habits is further treated.

The implications for construction of problems, testing techniques, and teaching methods are briefly discussed.

11:45 A.M. Consistent characteristics in the behavior of creative mathematicians and chemists. DONALD E. WALKER, *University of Chicago*. (Sponsor, Benjamin S. Bloom)

This study is an attempt to delineate consistent characteristics in the behavior of highly creative chemists and mathematicians. A primary assumption underlying this research is that the behavior of creative workers in testing situations will reveal the characteristics which are basic to creative developments in their specific fields. The achievement of any particular product is a function of the conjunction of these constant factors and situational circumstances.

Out of a larger group of workers in these fields approximately thirty were selected on the basis of uniformly high ratings by two independent groups of

judges who were colleagues in the same area. These judgments were made on the basis of two criteria: (a) the influence of their writing and other products in providing basic reorientations in their field of specialization, and (b) the characterization of their work methods as involving unusual and imaginative ideas, novel perspectives in viewing problems, the formulation of previously unnoticed problems, *et al.*

The Ss were interviewed and given a battery of cognitive, perceptual, and projective tests. The analysis of data was primarily qualitative.

The research was guided by relatively detailed hypotheses about the influence of sensitivity, flexibility, individuality, originality, breadth, fluency, and concentration, differentiated in terms of three roughly demarcated behavior areas: perception, cognition, and ideation. These hypotheses were regarded as supported when the characteristics were consistently found within the group of Ss.

The implications of these results are considered in relation to the selection of candidates for certain types of training or research positions as well as for the development of curricular and instructional procedure.

HUMAN LEARNING: THEORY AND PRACTICE

1:40-3:40 P.M., Monday, Ballroom, Mayflower

(Co-sponsored with Divisions 7 and 16.
See Division 7's program.)

SOCIAL FACTORS IN LEARNING

2:50-4:05 P.M., Monday, South American Room, Statler

GEORGE W. HARTMANN, Chairman

2:50 P.M. Some factors influencing the effects of audience participation on learning from a factual film. DONALD N. MICHAEL and NATHAN MACCOBY, *Boston University*.

PROBLEM: Previous research showed more learning from films when the viewer takes part in an "audience participation" procedure than when he does not. This increased learning might result from increased practice during the participation periods and/or from increased motivation to learn arising from participation. This experiment was designed to assess the relative contributions of practice and motivation to the increased efficiency of the participation procedure. Also two conditions were studied which were expected to affect the amount learned.

SUBJECTS: 48 high school classes saw an edited version of a film on civilian atomic defense.

PROCEDURE: Participation periods were alternated with

sections of film. Half the classes participated by writing ("overt practice") answers to questions on the previous section of film; half by thinking them ("covert practice"). Half the classes were told the correct answers after they had tried to answer the questions; half were not. Only half the questions finally tested were practiced during participation. It was hypothesized that if motivational changes occurred such increased motivation should affect both practiced and unpracticed items. If practice is the important factor, larger gains should occur on practiced items.

RESULTS: Audience participation procedures utilizing either overt or covert practice, along with the provision of the correct responses, resulted in highly significant improvements in learning verbal material compared to viewing the film without participation. Even without feedback of the correct response, participation appears to result in superior performance to no participation. Since these gains occur only on items practiced during the participation sessions, this increased learning is interpreted to be due primarily to the effects of practice rather than to the effects of changes in motivation to learn. The most important factor influencing the amount of learning was the provision of knowledge of the correct response after practice.

This research was conducted under contract with the Human Resources Research Laboratories, Headquarters Command, USAF.

3:05 P.M. An evaluation of small group work in a large class. GOODWIN WATSON, *Teachers College, Columbia University.*

Graduate students in a large ($N=350$) class in "Education as Personal Development" met all together for one hour, then spent one hour in groups composed of six to eight students, and a third hour back with the total class. Ratings at semester's end revealed that the modal student's subjective reaction to the group sessions was "enjoyed group," and "learned more than in most classes," but that group "accomplishment" was rated only "about average." Group work was generally rated as less valuable than lectures, about equivalent to required readings, more valuable than panels, movies, or written work. Students valued "stimulation of ideas from others" and "knowing people of different backgrounds" above "learning about group procedure" or "opportunity for self-expression." Chief limitations seemed to be: (a) inexperience in group process; (b) inappropriate physical setting, and (c) inadequate leadership.

Of students who had never taught, 65% gave high rating to group work; of those who had taught 1-5 years, 61% rated their group high; of those with more

than 5 years professional experience only 35% valued group work highly. Men rated group experience slightly higher than did women. Appreciation of group sessions proved unrelated to amount of previous study in psychology or education. Those who stated on a questionnaire given at the beginning of the term that they usually preferred working in a group to working alone did not turn out to enjoy their groups more than did others, but they were more apt to give top rating to what they learned from the group.

Half of the small groups were arbitrarily directed to work on a single topic (of their own choice) all term; the other half discussed a different issue at each session. Results showed no clear advantage for either procedure.

3:20 P.M. Difficulties encountered in group decision-making. KENNETH F. HERROLD, IRVING LORGE, JOEL DAVITZ, and DAVID FOX, *Teachers College, Columbia University.* (Sponsor, Irving Lorge)

PROBLEM: To describe and evaluate difficulties encountered by individuals in group decision-making.

SUBJECTS: 100 graduate students at Teachers College, Columbia University, enrolled in a course in group development.

PROCEDURES: The Ss in groups were asked to write, as a group, a concrete and comprehensive plan of action to raise the morale and operating efficiency of an isolated Air Force base. There were twenty groups of five Ss. Each group had an assigned observer who was not a member of the class.

Each S, in a group, had been provided at the start with specific and unique information. Once this information had been read and digested, the S was asked to list the most important points of information. The information protocol and the written points were collected.

The Ss then formed groups, to which they had been assigned, to prepare the group plan of action. The group process behavior was observed, recorded, and analyzed. The individual and group written content material was analyzed in terms of those factors and effects which appeared to aid or prevent group decision-making.

RESULTS: The difficulties encountered in group decision-making were related to "finite" and "nonfinite" decision-making and to the values of the decision-making process as a technique of motivation. The difficulties involve a multiplicity of factors related to informational readiness, prior experience with the group situation, communication skill, and skill in cooperative endeavor. In group problem-solving process, the group which first appraises the information of all members, organizes the information in action steps related to causal factors, and handles the

task as a *rational* problem solving process, appears to have less difficulty.

This research was conducted under a contract with the Human Resources Research Institute of the Air University, Maxwell Field.

3:35 P.M. A study of the effects of psychological education upon the personality structures of teachers. MORTON LEVITT, BEN O. RUBENSTEIN, M. L. FALICK, and MILDRED PETERS, *Wayne University*. (Sponsor, William Clark Trow)

This paper evaluates certain results of a four-year school-based mental hygiene program in a small town of 5,000 inhabitants. The professional personnel included a psychiatrist, a psychologist, and a psychiatric social worker. The focus here is primarily upon results of an attempt to elicit teacher support and understanding of the entire program through a series of formal and informal conferences revolving around effective utilization of principles of educational psychology in classroom situations. Conferences with teachers were of three varieties: (a) regularly scheduled meetings to which all teachers were invited to discuss general mental hygiene problems; (b) teacher-requested meetings to discuss behavioral difficulties of specific children whose symptoms caused the teacher concern, and (c) progress conferences with individual teachers to integrate the treatment and educational program of a particular child.

Staff agreement as to results were as follows: (a) initially the program created anxieties and resistances in some teachers whose adjustment was threatened by the nature of the educational effort, i.e., rigid teachers tended to become more rigid while timid teachers became even more timid; (b) as the program progressed, some of the above were able to move ahead and integrate their new understanding into everyday classroom practice, while others were not, and (c) a small group of teachers of varying degrees and training were able from the outset to accept the aims and objectives of a program stressing the basic unity of the child.

The following conclusions became evident: (a) that the psychological education of teachers must be preponderantly in the direction of giving them continuous ego support and acceptance of the validity of their feelings; (b) that teacher anxieties are principally activated by emphasis upon discussion of instinctual material, and (c) that success or failure of this and similar programs depends upon the ability of the therapeutic team to accept and support the teacher.

3:50 P.M. A guess-who test and its relation to other measures of pupil adjustment. DONALD BRIELAND, *University of Minnesota*.

PURPOSE: To determine the relationship of results on a guess-who type test to pupil inventory scores and to teachers' ratings of adjustment.

PROCEDURE: A test was developed to measure peer-group status in terms of 16 desirable and 16 undesirable traits. Pupils also filled out a battery of inventories concerning psychoneurotic tendencies, citizenship, home duties, play activities, and family relationships. These results were the basis for a composite pupil index score for each child. A similar teacher index score was determined from teachers' ratings on various aspects of behavior.

SAMPLING: These measures were given to over 3,000 children from grades 3 to 12 in a Minnesota county. This report is based on 535 cases including 209 boys and 226 girls in grades 4 to 6.

RESULTS: 1. The guess-who measure showed a wide range in the number of mentions received by various children.

2. The teacher index correlated as follows: —.61 with undesirable mentions; +.55 with desirable mentions; and +.78 with net mentions determined by using the algebraic result of subtracting undesirable mentions from desirable ones.

3. Correlations with pupil index showed similar trends but were considerably lower. The highest value was +.23 with desirable mentions.

4. Relationships between these findings and other studies will be considered.

5. Relationships between school achievement and intelligence and these variables will be discussed.

6. Special attention will be given to methodological problems of guess-who analysis.

BUSINESS MEETING AND PRESIDENTIAL ADDRESS

4:30–6:00 P.M., Monday, South American Room, Statler

H. H. REMMERS. Learning—What Kind of Animal?

SYMPOSIUM: STUDENT-CENTERED VS. INSTRUCTOR-CENTERED COLLEGE INSTRUCTION

8:40–10:40 A.M., Tuesday, Williamsburg Room, Mayflower

(Co-sponsored with Division 2.)

PERCIVAL M. SYMONDS, Chairman

Participants: BENJAMIN BLOOM, N. P. CANTOR, MORTON DEUTSCH, WILBERT J. McKEACHIE, and LAUREN G. WISPÉ.

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room, Mayflower

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room,
Mayflower

SYMPOSIUM: RECOMMENDATIONS OF THE MID-CENTURY COMMITTEE ON OUTCOMES IN ELEMENTARY EDU- CATION—THEIR IMPLICATIONS FOR RESEARCH IN EDUCA- TIONAL PSYCHOLOGY AND CHILD DEVELOPMENT

1:40-3:40 P.M., Thursday, Federal Room, Statler

(Co-sponsored with Divisions 5, 7, and 16.)

WILLIAM W. TURNBULL, Chairman

Participants: G. LESTER ANDERSON, JOHN DOBBIN,
ROBERT J. HAVIGHURST, RAYMOND G. KUHLEN,
and HARRY N. RIVLIN.

SYMPOSIUM: WHAT SHOULD BE THE PROFESSIONAL TRAINING OF EDU- CATIONAL PSYCHOLOGISTS?

1:40-3:40 P.M., Friday, Congressional Room, Statler

(Co-sponsored with Divisions 12 and 16.)

WM. CLARK TROW, Chairman

Participants: ARTHUR P. COLADARCI, WARREN A.
KETCHAM, J. W. TILTON, ASAHIEL D. WOODRUFF,
and DEAN A. WORCESTER.

DIVISION OF SCHOOL PSYCHOLOGISTS

INSTITUTE: SPEECH PROBLEMS OF SCHOOL CHILDREN

9:00-11:45 A.M. and 1:30-4:30 P.M., Sunday,
South American Room, Statler

(Co-sponsored with Division 15, National Society for
Crippled Children and Adults, and American
Speech and Hearing Association.)

Morning Session

GEORGE W. HARTMANN, Chairman

9:00 A.M. MILDRED TEMPLIN, *University of Minne-
sota*. The development of speech and language in
children.

9:30 A.M. RICHARD SCHIEFELBUSCH, *University of
Kansas*, and CHARLOTTE WELLS, *University of
Missouri*. Discussants.

10:00 A.M. Intermission.

10:15 A.M. WENDELL JOHNSON, *State University of
Iowa*. Orientation to the field of speech pathology.

10:45 A.M. ERNEST HENRIKSON, *University of Min-
nesota*. Organic speech disorders.

11:45 A.M. JAMES MULLENDRE, *University of Vir-
ginia*, and MERLE ANSBERRY, *University of Mary-
land*. Discussants.

Afternoon Session

FRANCES A. MULLEN, Chairman

1:30 P.M. EUGENE McDONALD, *Pennsylvania State
College*. Diagnosis of speech cases.

2:00 P.M. LEO DOERFLER, *University of Pittsburgh*.
Hearing disorders.

2:30 P.M. LOUIS DiCARLO, *Syracuse University*,
and T. ERNEST NEWLAND, *University of Illinois*.
Discussants.

3:00 P.M. Intermission.

3:15 P.M. DARREL MASE, *University of Florida*.
Speech training methods.

3:45 P.M. HAROLD WESTLAKE, *Northwestern Uni-
versity*. Methods of training children with organic
involvements.

4:00 P.M. MARGARET HALL, *Chicago Public
Schools*, and MARION GILMORE, *Delaware State
Board of Health*. Discussants.

EXECUTIVE COMMITTEE MEETING

7:30 P.M., Sunday, District Room, Statler

BUSINESS MEETING

9:00-11:30 A.M., Monday, Cabinet Room, Mayflower

LUNCHEON AND PRESIDENTIAL ADDRESS

12:00-1:30 P.M., Monday, Room 260, Mayflower

GEORGE MEYER. Some Relationships between Ror-
schach Scores in Kindergarten and Reading
Achievement in Primary Grades.

HUMAN LEARNING: THEORY AND PRACTICE

1:40-3:40 P.M., Monday, Ballroom, Mayflower

(Co-sponsored with Divisions 7 and 15.
See Division 7's program.)

DISCUSSION GROUP: NEW PROCEDURES AND TECHNIQUES FOR THE SCHOOL PSYCHOLOGIST

1:40-3:40 P.M., Monday, Cabinet Room, Mayflower

HARRY B. GILBERT, Chairman

DISCUSSION GROUP: RESEARCH AND THE SCHOOL PSYCHOLOGIST

2:50-4:50 P.M., Monday, Jefferson Room, Mayflower

EDWARD A. RUNDQUIST, Chairman

DISCUSSION GROUP: ADMINISTRATIVE PROBLEMS IN A SCHOOL PSYCHOLOGICAL PROGRAM

4:00-6:00 P.M., Monday, Cabinet Room, Mayflower

THELMA G. THURSTONE, Chairman

NEW EXECUTIVE COMMITTEE MEETING

5:00-7:00 P.M., Monday, Jefferson Room, Mayflower

PERSONALITY FACTORS INCIDENT TO STUDENT ADJUSTMENT

8:40-9:25 A.M., Tuesday, North Room, Mayflower

MAY V. SEAGOE, Chairman

8:40 A.M. The authoritarian personality and general education. SHARON GOLDBERG and GEORGE G. STERN, *University of Chicago*. (Sponsor, George G. Stern)

The Inventory of Beliefs, an instrument similar to Sanford's E and F scales in measuring ethnocentrism, was administered to 500 college freshmen. Analysis of grades at the end of the first quarter revealed significantly poor performance in humanities and social science for low-scoring ethnocentrists. Such performance was not related to intellectual capacity as measured by the ACE. While all of the highs completed the first quarter of school, approximately 30% of the lows dropped out.

Thirty-three students were then further studied by group tests of perceptual-cognitive factors, problem

solving, Rorschach, TAT, sentence completions, and a semiprojective interest index. Personality evaluation of the six highest and six lowest cases was undertaken. This revealed a trend towards repression or rejection of impulses, contradictory and distant parental images, and an absence of nurturant capacities among the lows. A reverse trend characterized the non-ethnocentrists.

The most extreme ethnocentric individual, scoring some twenty points below the other lows, was selected for more intensive analysis. This individual seemed to typify all the authoritarian traits found scattered among the lows. This pattern was highly consistent throughout all projective material for this case. Furthermore, examination of behavioral data indicated strong rejection of all esthetic and emotional experiences, concrete goals, and extreme religious preoccupation. Grades were mediocre, despite evidence of superior intelligence. Personal difficulties with both peers and faculty appeared. Administrative persuasion had resulted in the initiation of psychiatric treatment.

Further psychological testing as therapy proceeds offers a unique opportunity to evaluate what, if any, changes occur in perceptual, attitudinal, behavioral, and dynamic personality areas of an authoritarian personality.

8:55 A.M. Child-parent attitudes in delinquency. H. PAUL JANES and EDITH C. LOUGHRIDGE, *Camden, New Jersey Public School Psychological Clinic*. (Sponsor, H. Paul Janes)

Because it has been commonly observed that delinquent children and their parents exhibit high "resistance" to the treatment of the casework agencies the present comparative study of the family relationships of 50 delinquents and 50 nondelinquents was made.

The data were provided by qualified clinical examiners who had unlimited facilities and at least 8 hours of time for the study of each case, and who were unaware of the use to which the data would be put.

The data show that the incidence of parental incompetence among delinquency producing families, rejection of the problem, and loss of control of the child, was very much higher than that of parental dominance, parental projections in the behavior of the child, and conflict in the home. In the normal or control sample the incidences of all these factors were negligible.

Hence, it is concluded that the resistance to treatment exhibited by delinquency producing parents is mostly on account of incompetence, rejection of the child or of his problem, and loss of control. The re-

sistance in the child is on account of his having acquired negative habits in his pursuit of "escape from control."

The study suggests that Peck is correct in his observation that the "resistance" of delinquents and their parents is only equaled by the resistance of casework agencies to the treatment of these cases outside traditional casework agency pattern.

It also suggests that there is a reason for the emphasis, of some, upon the importance of parental dominance and frustration in producing delinquency. Because dominant parents exhibit concern for their children, perhaps these are the only kinds of delinquency producing parents with whom the proponents of the "dominance-frustration" theory are familiar, since only these people (among the parents of delinquents) will go for help to agencies who "cannot help people who do not want their help."

9:10 A.M. The incidence of frustration in a counseled and noncounseled high school population. ALBERT S. BECKHAM, *Dusable High School, Chicago, Illinois.*

This is a comparative study of frustration in two high school populations, a counseled and a non-counseled one. There are two places where frustration may be observed in the schools, the one among failures, the other with behavior and conduct problems.

Frustration is improperly directed behavior. There is a difference between behavior expressed during a state of frustration and behavior which is goal oriented.

The problem was to observe the effect of counseling on frustration.

The method was to select 100 students, all failures from the experimental school (Dusable), who received counseling. Then to select a similar number of failures from a neighboring school where there was no counseling of a professional nature. The K.A. Test of intelligence was administered to both groups, followed by the Thurstone Personality Schedule. The frustrated students of the experimental group were frequently counseled concerning their problems and frustrations, while those of the control group were seen only at the beginning and end of the experiment. RESULTS: Drop-outs were more prevalent in the non-counseled group. Good counseling tends to keep high school students in school. The expression of resignation is more frequently observed with the non-counseled. The two groups were about the same in intelligence. A continuation of behavior-conduct problems is less frequent with the counseled.

The types of behavior problems observed in both groups were: destructive behavior, sibling rivalry, whining, sensitiveness, criminal fixation, drugs, truancy, and stealing.

There was a decided diminution of all problems in the counseled group except stealing. The types of stealing are more related to other psychosocial patterns as family, neighborhood, attitudes, and social pressures.

CURRENT RESEARCH IN READING

9:50-11:50 A.M., Tuesday, North Room, Mayflower

(Co-sponsored with Division 17.)

HELEN E. BOGARDUS, Chairman

9:50 A.M. Personality characteristics of retarded readers as measured by the Picture-Frustration Study. GEORGE SPACHE, *University of Florida.*

PROBLEM: To compare the personality characteristics of retarded readers with various normative groups.

SUBJECTS: 50 retarded readers, ages 6-14.

PROCEDURE: The Children's Form of the Rosenzweig Picture-Frustration Study was used to assess the attitudes and feelings of the poor readers who came to the Reading Clinic for diagnosis or therapy. The case study files for 50 of these pupils were drawn at random and the data derived from the P-F test collated. The data for the group of poor readers were contrasted with the original norms for the P-F Study for Children of the same ages, and with norms derived from other nonretarded groups.

RESULTS: The attitudes toward frustration and the aggressive impulses of the group of poor readers differ from normal readers in several distinct ways. Attitudes toward adults and toward other children are similarly significantly different. These feelings and attitudes have significance for any persons attempting to promote progress in reading among non-readers or retarded readers. Some explanation for the failure of conventional programs in remedial reading to benefit many such pupils may be found in the resistant and negativistic attitudes present among retarded readers. Types of therapy more likely to be successful will be suggested.

10:10 A.M. The relationship of reading skills as learned in grades 4-college freshman years to verbal and performance scores on an individual intelligence test. VIRGINIA M. BINKS, *Remedial Education Center, Washington, D. C.*, DESMOND V. FOSTER, *Forestville Elementary School, Forestville, Md. and Remedial Education Center, Wash-*

ington D. C., NICHOLAS A. ADAMS, *Frederick Sasser High School, Upper Marlboro, Md.*, and FRANCES TRIGGS, *University of Maryland*.

PROBLEM: To determine the relationship between success in learning word recognition, comprehension, and vocabulary skills and verbal and performance abilities as measured by the Wechsler Intelligence Scale for Children and the Adult Wechsler-Bellevue Intelligence Scale.

SUBJECTS: 40 Ss in grades four, five, and six and 40 subjects in grades seven through college freshman year selected at random for the purposes of this study.

PROCEDURE: Standardized reading tests, The Diagnostic Reading Tests, Survey Section: Lower Level (Grades 4-6) and Survey Section (Grades 7-college freshman year) were administered to measure the extent to which the subjects had the following reading skills: word recognition (grades 4-6), comprehension, vocabulary, and rate of reading using types of materials used for instruction in these grade levels. The relationships between these scores and verbal and performance scores on the WISC and Form I of the Adult Wechsler-Bellevue Intelligence Scale, respectively, were correlated to determine kinds of abilities necessary for learning these reading skills.

RESULTS AND CONCLUSIONS: It was found that the relationship of the Wechsler Scale verbal scores to the scores on the reading tests is much higher than the relationship of the performance score to the reading tests. However, an investigation of the scores of individuals indicates that learned reading skill does not parallel either of the abilities measured by the verbal and performance scores. Reasons for this are discussed.

10:30 A.M. Word attack as a factor in reading achievement in the elementary school. ELOISE S. NELSON and RALPH C. BEDELL, *American University and U. S. Office of Education*. (Sponsor, Ralph C. Bedell)

PROBLEM: To determine what effect the teaching of word attack has upon the reading achievement of elementary school children.

SUBJECTS: 61 fourth, fifth, and sixth grade students of a private girls' school. The class populations are as follows: fourth—18 students; fifth—21 students; sixth—22 students.

PROCEDURE: (a) The technique of matched pairs was used to establish two equivalent groups in each grade. Scores attained on the Diagnostic Reading Test, Elementary Survey-Grades 4 to 6, provided the basis for matching. (b) Students in the experimental group received eighteen periods of special instruction in word attack. Each period included practice in learning

exercises in word attack constructed by the author of this paper especially for this research, there being no suitable materials otherwise available for practice in word attack. At the conclusion of each experimental period, the student gave an unstructured written opinion of his learning achievement. Experimental periods were twenty-five minutes in duration. (c) Students in the control group received no special instruction in word attack. (d) Upon completion of the special instructional periods, an alternate form of the Diagnostic Reading Test, Elementary Survey—Grades 4 to 6, was administered.

RESULTS: Comparison of test results shows a gain for the experimental group over the control group in word attack and in certain other aspects of reading achievement. The complete analysis shows relationship of improvement in word attack to improvement (or lack of it) in vocabulary, comprehension—story type, comprehension—specific information, and student's opinions of their own learning.

Suggestions are made regarding the use of word attack in reading instruction.

COMMENTS: Discussion of effectiveness of the procedure employed and the experimental practice exercises will be given in relation to both further experimentation and to teaching.

10:50 A.M. Improving executive efficiency through reading. RALPH BEDELL, *United States Office of Education*, and FRANCES TRIGGS, *University of Maryland*.

PROBLEM: The effectiveness with which an executive handles the reading of material for which he is responsible may determine his effectiveness on the job. This is true because reading is the main avenue of communication in the agency in which this experiment was conducted. If one person is unable to read and disseminate pertinent material, the whole staff functions involving this person may become inefficient. To what extent does instruction in reading improve the skills necessary for improved executive effectiveness based on reading situations?

SUBJECTS: 36 adults holding executive positions in the Federal Security Agency.

PROCEDURE: All Ss were tested with a form of the Survey Section of the Diagnostic Reading Tests and retested at the end of instruction with a comparable form. Instruction included work in comprehension, critical reading, vocabulary, word recognition skills, skimming, and rate of reading in accordance with the specific needs of the individual. At the end of the course, Ss were asked to give an unstructured report of their feelings regarding the effectiveness of the instruction.

RESULTS AND CONCLUSIONS: Data indicate a significant improvement as measured by tested performance; attitudes are favorable toward this type of instruction; opinions of the subjects for improvement of future courses are presented. A critical interpretation by a committee of evaluators is included as a part of the findings.

11:10 A.M. Evaluation of the reading program at the U. S. Naval Academy. LCDR. ARTHUR M. POTTER, USN, *U. S. Naval Academy*.

PROBLEM: The U.S. Naval Academy, recognizing the need for improvement in reading skill, conducted special reading classes during the Summer of 1951 for the Class of 1955. The course was designed to improve reading skill by training the student to increase his reading rate without loss in comprehension, and to establish in the mind of each student the relationship between reading rate and comprehension of what is read. Comparisons were made between test, retest, and follow-up scores, and between grades made by control and experimental groups.

SUBJECTS: 161 midshipmen of Class of 1955.

PROCEDURE: All midshipmen were given Diagnostic Reading Test, Survey Section, Forms A and B, administered during first and eighth weeks respectively. A group of 28 midshipmen was selected from each of the eight companies who had the slowest reading rate and a score of at least fifty on the vocabulary and thirty on the comprehension section of the Form A test. These groups were given twenty periods of reading training consisting of reading *The Book of the Navy* as assigned by the English Department and reading manuals, *Improve Your Reading* by F. O. Triggs, and *Study Type Reading Exercises* by R. Strang.

RESULTS AND CONCLUSIONS: The group of midshipmen trained in reading made consistently higher grades than the untrained group. The trained and untrained were retested six months after training period ended on a form of Diagnostic Reading Test, Survey Section, comparable to the one given before and immediately after training. These data show that the gains made during training have been retained to a marked degree.

11:30 A.M. Discussant: LEAH GOLD FEIN.

ETHICAL PROBLEMS OF COUNSELORS AND SCHOOL PSYCHOLOGISTS

1:40-3:40 P.M., Tuesday, East Room, Mayflower

(Co-sponsored with Division 17.
See Division 17's program.)

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room, Mayflower

VICTOR H. NOLL, Chairman

ROUND TABLE: PERSONALITY COUNSELING OF THE MENTALLY RETARDED AND COUNSELING OF THEIR PARENTS

4:00-6:00 P.M., Tuesday, Presidential Room, Statler

(Co-sponsored with Divisions 12 and 17 and the Office of Vocational Rehabilitation, Federal Security Agency. See Division 12's program.)

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room, Mayflower

SYMPOSIUM: RECOMMENDATIONS OF THE MID-CENTURY COMMITTEE ON OUTCOMES IN ELEMENTARY EDUCATION—THEIR IMPLICATIONS FOR RESEARCH IN EDUCATIONAL PSYCHOLOGY AND CHILD DEVELOPMENT

1:40-3:40 P.M., Thursday, Federal Room, Statler

(Co-sponsored with Divisions 5, 7, and 15.
See Division 15's program.)

SYMPOSIUM: WHAT SHOULD BE THE PROFESSIONAL TRAINING OF EDUCATIONAL PSYCHOLOGISTS?

1:40-3:40 P.M., Friday, Congressional Room, Statler

(Co-sponsored with Divisions 12 and 15.
See Division 15's program.)

DIVISION OF COUNSELING AND GUIDANCE

PREDICTING SUCCESS

2:50-3:50 P.M., Monday, Congressional Room,
Staiter

LOUIS LONG, Chairman

2:50 P.M. The role of parents in determining academic success. GEORGE WEIGAND and DENZEL D. SMITH, *University of Maryland*.

PROBLEM: To show the importance of differential parental treatment of offspring in reinforcing and modifying patterns of behavior which differentiated between successful and unsuccessful probational students when such a differentiation could not be made on the bases of high school records and tests of scholastic aptitude and achievement.

SUBJECTS: 81 students who, because they lacked high school certification, were admitted on probation to the College of Special and Continuation Studies of the University of Maryland, to remain there until they had achieved a 2.0 HPR which would allow them to transfer to the colleges to which they had originally applied.

PROCEDURE: The semistructured interview technique was utilized. The interview protocols were comprised of the responses to 81 questions categorized according to 97 items. Indices of motivational factors were identified from the interview protocols. A sizeable number of these indices differentiated between the successful and unsuccessful students.

RESULTS: In all, 33 items differentiated between successful and unsuccessful students at a statistically significant level of confidence. Nine items indicated highly significant differences in the home and personal area. Five of these items are directly concerned with the parent-child interrelationship. The implications of these 5 items and of the other 28 are discussed specifically in this paper. The items in the home and personal area suggest that while 33 individual items differentiated out successful students, it is possible to specify some general and specific conditions which modified and reinforced the observable patterns of behavior which differentiated between successful and unsuccessful students.

3:05 P.M. Predictors of success for cooperative occupational education classes in Kansas City, Missouri, high schools. LEE E. ISAACSON, *University of Kansas*.

PROBLEM: To determine test variables which will predict success in a typical secondary school work-experience program. The selected program is the Kansas City, Missouri, Cooperative Occupational Education (COE) program in which students attend school

mornings and work in business or industry afternoons. Success criteria are defined as teacher's or coordinator's end-of-year grade, student's self-rating of COE progress, and employer's rating of student's progress.

SUBJECTS: All students enrolled in COE in half of the Kansas City Public High Schools (four white, one Negro school). Original sample population of 195, final population of 144 cases.

PROCEDURE: Thirty-two variables, consisting of sub-scores or part scores for American Council on Education Psychological Exam for High School Students, 1946 form; Kuder Preference Record, form BM; Guilford-Zimmerman Temperament Survey; and USES General Aptitude Test Battery were correlated with three criteria of teacher's end-of-year grade, student's self-rating, and employer's rating of student's progress. Those variables correlating significantly at the 1% level of confidence were then selected for computation of a multiple correlation coefficient by the abbreviated Doolittle system. A further multiple correlation coefficient was computed using those variables contributing most to the original multiple correlation. These variables were then tested for significant differences between occupational objective groups and sex groups.

RESULTS: Eleven variables correlated significantly with teachers' grades with Pearsonian coefficients of correlation of $+ .21$ to $+ .37$. All eleven variables produced a multiple correlation coefficient of $.58$. Those four variables contributing most of this multiple correlation coefficient, when used in the computation of another multiple correlation coefficient, produced one of $.55$. No significant differences were found on these four variables between occupational groups or between sex groups. A table of weighted scores was then developed for use in prediction of teacher's grade. Only one variable correlated significantly with self ratings and with employer ratings.

CONCLUSION: Summation of weighted scores on four variables will classify a student within plus or minus one grade category of teacher's assigned grade in 85% of cases included in validating group but fails to do so for self ratings or employer ratings.

3:20 P.M. The relationship of certain psychological test scores to academic success in chemical engineering. DANNIE J. MOFFIE and CHARLES R. MILTON, *North Carolina State College*.

PROBLEM: The problem of this study was to ascertain the statistical relationship between academic success of chemical engineers as measured by grades for all courses, required and elective, and the scores on

psychological tests of intelligence, special abilities, aptitudes, personality, and interests.

SUBJECTS: 150 chemical engineers who were tested in their senior year. The data were collected over a five-year period of time.

PROCEDURE: This study was conducted to ascertain relationships of psychological test scores to academic success. The psychological tests used in the battery for each year were the following: (a) Otis Self-Administering Test of Mental Ability, (b) Stanford Scientific Aptitude, (c) Bennett Mechanical Comprehension, (d) Minnesota Paper Form Board, (e) Bernreuter Personality Inventory and (f) the Strong Vocational Interest Test. Academic success was based upon the grade-point average for all course work taken in residence at the college and used as the criterion. Psychological tests were administered during the student's senior year. A grade-point average was obtained for each student by dividing the total number of quality points earned by the total number of credits earned. Results for this study were based on the five years combined rather than for each year separately. Pearson product-moment correlations were computed between test scores and academic success and a multiple correlation coefficient was also obtained.

RESULTS: Correlation coefficients, significant at the 1% level of confidence, were found with the Otis Self-Administering Test of Mental Ability and the Stanford Scientific Aptitude Test. By using all tests in the battery a multiple correlation coefficient of .67 was obtained.

3:35 P.M. How well do premedical selector variables predict success in medical school? DENZEL D. SMITH, ELEANOR SCHMIDT, and RAY C. HACKMAN, *University of Maryland*.

It is particularly important to evaluate the predictive value of indices available for selection of applicants to medical schools since failures cannot be replaced in progress and thus the potential number of physicians is affected each year. This study discusses the effectiveness of selection indices at the University of Maryland Medical School.

The population for this study is composed of students who completed three-year premedical training in the College of Arts & Sciences, University of Maryland in 1948-49. This population consists of approximately 60 acceptees and 44 rejectees. The criterion of success is grade point averages earned during the first year in medical school. The selector variables include: seven different grade point averages based on premedical courses; seven scores on achievement and scholastic aptitude tests taken when first semester freshmen; eight scores on the Medical College Admission Test; and undergraduate premedical

committee ratings. Correlational techniques are used to analyze the data.

The selector variables showing the highest correlation with the criterion are chemistry grades, mathematics grades, zoology grades, humanities grades, and foreign language grades. The range of coefficients is from .48 to .61. The selector variables showing the lowest magnitude of correlation with the criterion are Iowa High School Content Examination, English and Social Science Sections; ACE Psychological Examination, L Score and Total Score; two sections of the MCAT. The range of coefficients is from .12 to .32.

A multiple R of .82 is found between the criterion and the following six selector variables: zoology grades, chemistry grades, mathematics grades, foreign language grades, and two sections of the MCAT. The multiple R is based on a sample of 44 cases having complete data. Using the same group the multiple R for premedical grade averages alone is .80. In a group consisting of 60 cases the multiple R using all parts of MCAT is .54.

These data indicate that effective selection can be done for the Maryland Medical School from information available from the premedical training program.

PRESIDENTIAL ADDRESS, BUSINESS MEETING, AND SOCIAL HOUR

4:00-6:00 P.M., Monday, Congressional Room, Statler

C. GILBERT WRENN, Chairman

DONALD E. SUPER. A Theory of Vocational Development.

CURRENT RESEARCH IN READING

9:50-11:50 A.M., Tuesday, North Room, Mayflower

(Co-sponsored with Division 16. See Division 16's program.)

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room, Mayflower

VICTOR H. NOLL, Chairman

ETHICAL PROBLEMS OF COUNSELORS AND SCHOOL PSYCHOLOGISTS

1:40-3:40 P.M., Tuesday, East Room, Mayflower

(Co-sponsored with Division 16.)

NICHOLAS HOBBS, Chairman

Participants: BERTHA M. LUCKEY, J. KIRK SEATON, RALPH F. BERDIE, ROBERT S. WALDROP, and CORNELIA D. WILLIAMS.

ROUND TABLE: PERSONALITY COUNSELING OF THE MENTALLY RETARDED AND COUNSELING OF THEIR PARENTS

4:00-6:00 P.M., Tuesday, Presidential Room, Statler

(Co-sponsored with Divisions 12 and 16 and the Office of Vocational Rehabilitation, Federal Security Agency. See Division 12's program.)

SYMPOSIUM: RESEARCH IN COUNSELING

4:00-6:00 P.M., Tuesday, East Room, Mayflower

Participants:

PAUL L. DRESSEL, Chairman. Introductory remarks. The difficulties in research on counseling.

WILLIAM A. MANN. Research activities of counseling centers.

EDWARD J. SHOEN, JR. Criteria of counseling effectiveness.

HAROLD B. PEPINSKY. A proposed research design.

The Research Committee of Division 17 has sponsored through subcommittees several activities which merit reporting and discussion on some basis other than a formal committee report. A symposium on research in counseling seems to be a natural way to present the thinking and proposals of the committee.

One project involves a survey of the way in which counseling centers finance and carry out research. In an early discussion of this problem the subcommittee proposed an investigation of the hypothesis that operating budgets accounted for a larger percentage of research done than did special research appropriations. A survey of the amount of research done and the method of financing it is being carried out this year and the report will be available as one phase of the symposium.

A second interest of the research committee has been that of reviewing attempts at evaluating the effectiveness of counseling in order to (a) summarize the types of criteria used, (b) study the experimental designs, (c) synthesize the results of this review into a model research proposal. The activities of the committee in this regard are sufficiently significant and stimulating to justify presentation of the results of their thinking to a larger group for reaction and discussion. An attempt has been made to select some of the more promising criteria and to develop a pattern for research which could be carried out in any counseling center.

EFFECTIVENESS OF COUNSELING

8:40-9:40 A.M., Wednesday, East Room, Mayflower

WINIFRED S. SCOTT, Chairman

8:40 A.M. The interrelation of factors associated with the initial interview to factors related to the marriage counseling process as a whole. HOWARD E. MITCHELL, *Veterans Administration, Philadelphia, Pennsylvania and the Marriage Council of Philadelphia.*

PROBLEM: There is a general feeling among psychotherapists and counselors that what occurs during the initial interview with the client in some ways influences future contacts with him. The purpose of this investigation was to study the extent to which certain factors arising within the initial interview are related to factors associated with the total contact with the client in a short-termed marriage counseling relationship. This investigation is related to the larger research program of the Marriage Council of Philadelphia under a grant from the National Institute of Mental Health, Public Health Service, on causes of marital maladjustment.

SUBJECTS: The case records of 94 adult males whose partners had also been counseled at the Marriage Council between 1942 and 1949 were utilized.

PROCEDURE: The data were abstracted from the case histories of the 94 subjects. An initial interview schedule was developed including the following items: (a) counselor's impression of client, (b) topics brought out during first interview, (c) client's attitude toward marital situation (i.e., whether client "accepts" or "projects" blame for marital difficulties during initial session), (d) whether client and partner came together or separately and whether interviewed jointly or separately, (e) client's picture of partner, (f) client's recognition of need for marriage counseling and (g) source of referral. The relationship of these initial interview factors to whole case factors was measured by the chi-square method after their reliability was established. Reliable whole case factors were drawn from the Marriage Council Case Analysis Schedule previously developed. Some of these factors are: (a) degree of movement, (b) hostility expressed toward partner, (c) client's attitude toward counselor, (d) total number of interviews, (e) reviewer's opinion of helpfulness of counseling, etc.

RESULTS AND CONCLUSIONS: The limitations of case history material are clearly recognized. Nevertheless, the findings indicate that some of the initial interview items bear a relationship to a wider variety of whole case factors than other items and suggest that

such factors might profitably be explored during the initial contact in marriage counseling.

8:55 A.M. Verbal correlates as measures of the effectiveness of clinical counseling. IRWIN A. BERG, *Northwestern University*.

It is hypothesized that if a client's adjustment improves during a series of counseling interviews, the content of his utterances should reflect this improvement. As an exploration of this hypothesis, a detailed analysis was made of the verbal content of a series of eight interviews with one successfully treated client. This case was a complete interview record published by Carl R. Rogers. The analysis consisted of first counting every word spoken by the client during each interview. Then a count was made for each interview of the total number of the following: ego words as *I, me*; empathic words as *you, they*; expletive-bombastic sounds as *F, Sh*; negative words as *no, not*; questions asked by the client, verbs in relation to adjectives, and the ratio of syllables to total words spoken. The adjective-verb and syllable ratios were computed on the basis of 100-word samples instead of the complete count used in the other verbal correlates.

It was found that as interviews increased, the percentage of empathic and negative words tended to increase while ego words and expletive-bombastic sounds tended to decrease. Rank-difference correlations computed for interview order and various verbal correlates yielded rho values ranging from $-.41$ for empathic words to $.65$ for ego words. When the interview series was ranked in order of percentage of ego words instead of chronological sequence, the range of the correlations increased from $-.57$ for ego and empathic word frequency to $.80$ for ego words and expletive-bombastic sounds.

These data indicate that the frequency of certain verbal expressions by the client may be used as a measure of therapeutic success in similar counseling situations. It is further suggested that therapeutic progress may be more closely related to verbal correlates than to the chronological order of the interviews.

9:10 A.M. Measurement of empathy in counseling trainees. WALTER M. LIFTON, *University of Illinois*.

The paper presents a report of one phase of a pilot study devoted to developing a better definition of the problems involved in counselor selection and training. The development and rationale for a procedure developed to measure the empathic relationship between an instructor and counseling trainees are described. Results from this device obtained on six subjects used in a trial run are evaluated.

9:25 A.M. Is precollege counseling for high school graduates worth while? T. BENJAMIN MASSEY, *Georgia Institute of Technology*.

PROBLEM: This paper presents a preliminary report of evaluative studies of the precollege Counseling Clinics held at the Georgia Institute of Technology during the summer of 1951. Particular emphasis is placed on changes in educational and vocational plans attributable to counseling and the values of the counseling program as judged by the participants.

SUBJECTS: 102 high school graduates who participated in the precollege counseling program at the Georgia Institute of Technology in the summer of 1951.

PROCEDURE: Data obtained on each student at the time of counseling include background information, test results, and counselor's prediction of academic success. Follow-up data obtained through questionnaire and interview techniques include ratings by counselees of positive aspects of the counseling program, changes in educational and vocational plans which could be attributed to counseling, and academic success of counselees in the first year of college study.

RESULTS: The relationship of predicted success in college work to success in the freshman curriculum is reported; changes in educational and vocational plans attributable to counseling are analyzed and discussed; counselees' evaluative comments are summarized and interesting trends indicated.

CONCLUSIONS: The results of this preliminary report would support continuation of precollege counseling for the high school graduate, although it is apparent that the program at this level comes "too late with too little." The values of such a counseling program as judged by the participants are considerably different from the goals of the program as set forth by its sponsors.

ROUND TABLE: PSYCHOTHERAPY IN A STUDENT COUNSELING SERVICE

9:50-11:50 A.M., Wednesday, Presidential Room, Statler

(Co-sponsored with Division 12. See Division 12's program.)

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room, Mayflower

SYMPOSIUM: VOCATIONAL COUNSELING OF AN ADULT: CASE PRESENTATION AND INTERDISCIPLINARY DISCUSSION

1:40-3:40 P.M., Wednesday, Pan-American Room, Mayflower

ALBERT S. THOMPSON, Chairman

Participants:

CHARLES S. NICHOLAS, counselor
HAROLD GOLDSTEIN, labor statistician
JAMES WHEDBEE, psychiatrist
DOUGLAS BLOCKSMA, psychologist
FRANK M. FLETCHER, Jr., psychologist
JOHN G. THEBAN, social worker

ROUND TABLE: REHABILITATION—ITS APPROACH AND SIGNIFICANCE TO PSYCHOLOGY

9:50-11:50 A.M., Thursday, East Room, Mayflower
(Co-sponsored with Divisions 12, 13, and Office of Vocational Rehabilitation. See Division 12's program.)

BUSINESS MEETING. TAKING STOCK AND LOOKING AHEAD

2:50-4:50 P.M., Thursday, East Room, Mayflower
DONALD E. SUPER, Chairman

Participants: RALPH C. BEDELL, C. GILBERT WRENN, ROY N. ANDERSON, and EDWARD C. ROEBER.

INTEREST AND PERSONALITY TESTS IN COUNSELING

9:50-10:50 A.M., Friday, East Room, Mayflower
ROBERT S. WALDROP, Chairman

9:50 A.M. Kuder occupational interest patterns in vocational counseling. DIANA RUSSELL and FREDERICK HERZBERG, *Allegheny Vocational Counseling Center and University of Pittsburgh*. (Sponsor, Frederick Herzberg)

PROBLEM: To compare interest patterns of the Kuder Preference Record, Form BI, (a) of experienced individuals in certain occupations with non-experienced entries into these occupations; and (b) of experienced individuals desiring to remain in those occupations with workers in these fields professing other vocational desires.

SUBJECTS: 269 engineers, 145 salesmen, 138 laborers, 47 managerial workers, and 52 laboratory workers whose interests and abilities have been measured by

the Allegheny Vocational Counseling Center as part of an industrial testing program to select and promote personnel for various Pittsburgh industries.

PROCEDURE: Each occupational group was subclassified into the following three categories: (a) entries—those having no experience in the area, (b) experienced personnel, and (c) experienced personnel who profess occupational interests in fields other than their present one.

Profiles, based on raw score means of each interest scale, were constructed for all subgroups of each occupational area. The magnitude and significance of any differences between mean scores for the subgroups were determined.

RESULTS: (a) No major differences on the Kuder occurred for engineers between the entries, the experienced, and other professed interest groups. (b) For salesmen, no differences were shown between entry and experienced groups. A lower persuasive mean was found for the other professed interest group. (c) For laboratory workers, a higher scientific mean occurred for the entry group. (d) Managerial workers professing other occupational desires had a higher persuasive mean score. (e) No major differences were found between the laborer groups.

CONCLUSION: For certain occupational groups, entry profiles are similar to those of experienced workers in the field. This similarity lends validity to the practice of using occupational profiles of experienced workers for vocational counseling.

It is important to recognize that occupational profiles of persons experienced on the same job may differ depending not only on the degree of satisfaction with the job, but on whether they desire other kinds of work. (Slides)

10:05 A.M. Construction and validation of a Picture Vocational Interest Inventory. HAROLD GEIST and H. B. McDANIEL, *Stanford University*.

PROBLEM: To determine the use, construction, reliability, and validity of a picture vocational interest test.

SUBJECTS: 1,500 male elementary and high school students in grades 4-12 in 4 communities throughout the State of California.

PROCEDURE: A Picture Vocational Interest Inventory consisting of 144 pictures of vocational and avocational interests was constructed. The test is divided into ten areas of interest and the 144 items divided into 48 triads. The test was administered in groups to the subjects. Each S was asked to identify each picture previous to taking the test and then was given the test with each picture being identified verbally by the examiner. Test results for all Ss were computed

as was per cent of Ss recognizing each picture according to a key. Reliability studies were computed according to the Kuder-Richardson formula, in grades 7-12 on a large part of the sample; results of the recognition studies were also computed.

RESULTS: Reliability studies for all scales are fairly high for such a test and certain items are to be deleted. Correlational studies of test results of subjects with such criteria as occupation of working parent, subjects liked best, subjects liked least, after school jobs, extra curricular activities, vocational aspirations and hobbies are discussed as validity criteria.

CONCLUSIONS: The picture method of measuring interests promises to be a useful one in vocational guidance particularly with counselees from atypical cultural homes, those with reading difficulties and those on the lower intelligence levels, as well as the general population. (Slides)

10:20 A.M. The relationship of personality characteristics to measured vocational interests in high school women teachers of English, social science, mathematics, and physical science. FRANCIS J. TOMEDY, *Board of Education, Paterson, New Jersey.*

PROBLEM: To investigate whether there are (a) characteristic personality traits in high school women teachers of English, social science, mathematics, and physical science, and in those who are vocationally interested in these subjects; (b) characteristic differences among the occupational groups; (c) differences from the general population as presented in norms; and (d) relationships between the measured vocational interests and measured personality traits of these groups.

SUBJECTS: 194 teachers: 83 English, 60 mathematics or physical science, 51 social science. All were college graduates with at least five years experience in teaching and employed at least three years in the school district. They were secured from 47 school systems in 20 states.

TESTS: Strong Vocational Interest Blank for Women (Revised); Guilford-Martin Inventories, GAMIN, STDCR, and Personnel; Johnson Temperament Analysis; Allport-Vernon Study of Values.

PROCEDURE: The occupational groups are compared in age, experience, and education among themselves and with the Strong groups by critical ratio and in their distribution of scores by chi square. Critical ratios for the 28 personality traits are found between the groups and norm populations, among the groups, between interested and not interested classes and finally between the interested classes. Biserial, linear, and curvilinear correlations between scores on the Strong Blank and personality tests and multiple cor-

relations for the significant linear correlations are computed.

CONCLUSIONS: (a) The occupational groups are distinctly differentiated from the norm populations and further differentiated among themselves but to a lesser degree. (b) Teachers vocationally interested have measured personality traits which differentiate them from those not interested. (c) Significant relationships between the Strong Blank and personality traits are found but the coefficients rarely exceed .40. (d) Darley's hypotheses and Strong's views are related to the present results.

10:35 A.M. The variability of individuals' scores upon successive testings on the Minnesota Multiphasic Personality Inventory. WILBUR L. LAYTON, *University of Minnesota.*

PROBLEM: The stability of personality inventory scores has been the subject of much speculation. The present study was concerned with the investigation of the variability of individuals' scores on a personality inventory, the Minnesota Multiphasic Personality Inventory, when these Ss were tested once a week for several months.

SUBJECTS: 9 male and 6 female graduate students in psychology.

PROCEDURE: These Ss were administered the Minnesota Multiphasic Personality Inventory once a week for a period of eighteen weeks. The number of repetitions per individual varied from nine to eighteen. Means and standard deviations were computed for each individual on each scale on the inventory. The Ss, by sex, were compared in terms of these statistics. In addition, each individual's profiles were coded using a modified Hathaway code system. The codes for the series of tests for each S were analyzed to determine the stability of the coded profiles.

RESULTS: The individual's scores varied considerably from test to test on the various scales. The standard deviation of one S on one scale exceeded the standard deviation for the standardization group on one scale. The variability of other individuals on some scales equaled that of the standardization group.

The coded profiles for individuals are more stable than the scores on individual scales.

CONCLUSIONS: It would appear from this study that counselors can place more reliance in regard to stability upon coded MMPI profiles than upon the intensity of scores on individual scales. Since none of the MMPI scales was consistently more variable than any of the others for the groups, it is concluded that the amount and area of variability is an individual matter. Some Ss had large standard deviations on some scales and not on others whereas for other Ss the situation was reversed.

DIVISION OF PSYCHOLOGISTS IN PUBLIC SERVICE

TEST RESEARCH IN GOVERNMENT AGENCIES

4:00-5:00 P.M., Monday, North Room, Mayflower

BEATRICE J. DVORAK, Chairman

4:00 P.M. Characteristics associated with achievement test item validity: A preliminary investigation. HARRY KAPLAN, JAMES B. TRUMP, BARRY T. JENSEN, and HAROLD L. McADOO, *Personnel Research Section, AGO, Department of the Army*. (Sponsor, Harold L. McAdoo)

PROBLEM: The specific purpose of this study was to determine the feasibility of a procedure for identifying item characteristics. Secondly, it was desired to determine the relationships among identifiable characteristics and an external criterion.

POPULATION: The test used in this study was a multiple-choice infantry weapons achievement test administered to enlisted infantrymen at two Army installations. This study was, however, concerned with analysis of the test itself rather than with a study of the population taking the test.

PROCEDURE: Seventy-three of the items in the test were used in this study. These items represented two groups: (a) items in which, at both installations, each correct alternative had the highest validity coefficient of any alternative in the item; (b) items in which the correct alternative did not have the highest validity coefficient at either installation. The criterion consists of membership of an item in group (a) or (b).

Product-moment intercorrelations were computed among eight item characteristics and the criterion. Each of the eight variables consisted of information which could be obtained in advance of administration of the test. The Wherry-Doolittle test selection technique was used in identifying characteristics which were related to item validity. Chi-square tests of independence were made among a number of the variables.

RESULTS: 1. Those characteristics most closely associated with validity were isolated and their relative contributions to validity were assessed.

2. These results tended to be confirmed by chi square.

CONCLUSIONS: The use of test selection in identifying item characteristics apparently is feasible and practical.

4:15 P.M. Attempted realism in a stenographic dictation test. GRACE COLBY LEONARD, SIDNEY ADAMS, and RALPH ROWLAND, *Department of State, Department of the Air Force, and Department of State*. (Sponsor, Sidney Adams)

PROBLEM: Conventional stenographic dictation tests have been criticized because of their failure to represent an actual office situation, in which the typical dictator often proceeds somewhat spasmodically and makes various changes as he dictates. In the field of typewriting, rough draft tests have sometimes been used to supplement straight copy tests, but there have been no comparable rough dictation tests in the stenographic field, although increasing attention has been given in recent years to classroom exercises involving rough dictation. The problem, then, on the part of the authors, has been to develop a rough dictation test and to ascertain whether such a test is sufficiently independent statistically of conventional dictation tests to justify its use.

PROCEDURE: First, a rough dictation test involving uneven timing and several changes and corrections in the course of the dictation was adapted from an office-style dictation exercise in a business education periodical. Tryouts with shorthand classes and with government stenographers showed feasibility of such a test. A readability analysis of correspondence was then made to establish the level of a later test. The test developed was based upon certain government correspondence. Both this test and conventional dictation tests were administered to shorthand classes and to government stenographers.

RESULTS: The paper presents notes on the interrelation of readability characteristics within the correspondence. A statistical analysis of the results of the rough dictation test and its comparison with conventional dictation tests are furnished.

4:30 P.M. The performance of deaf trainee laboratory mechanics on aptitude tests. SAMUEL KAVRUCK, *U. S. Civil Service Commission*.

PROBLEM: There is a dearth of research in aptitude testing with the deaf. The Office of Vocational Rehabilitation as recently as 1950 said "... the usefulness of only few such tests has been evaluated for the vocational training and job placement of the deaf. . . . Also the limited range of vocational opportunities for the deaf, . . . give investigations in this area more research than practical worth." National defense needs require the maximum use of physically handicapped groups. An opportunity occurred to apply aptitude tests to the selection of deaf laboratory mechanics for the National Bureau of Standards. The Bureau had found that deaf mechanics have a high production rate, and wished to employ more.

SUBJECTS: 20 trainee laboratory mechanics, including 5 deaf.

PROCEDURE: By job analysis, four aptitude tests se-

lected from the Civil Service Commission's multiple aptitude battery were administered. The tests were explained to the deaf by a hearing consultant from the Office of Vocational Rehabilitation skilled in the manual alphabet. The Ss were ranked on over-all job efficiency by the laboratory supervisor.

RESULTS: Job analysis indicated the major factor to be dexterity. The entire group, both hearing and deaf, was found to be high in gross dexterity. Sixteen of the 20, including all the deaf Ss, exceeded the mean score made on this test by naval apprentices. In alignment dexterity, 17 of the 20 Ss exceeded the mean score of mechanic learners and achieved the mean score of naval apprentices. On this test 3 of the 5 deaf Ss scored very high, 1 scored high, and 1 received a minimum passing score. Additional results will be presented.

CONCLUSIONS: Many existing tests can be adapted for use with deaf workers, or given directly without revision by skilled examiners. They are useful for initial selection, and placement, in public or private industry.

4:45 P.M. Job-analysis tests to rescue trade testing from make-believe and shrinkage. ERNEST S. PRIMOFF, *U. S. Civil Service Commission.*

PROBLEM: Trade test selection studies often begin with job analysis, but after statistics are gathered, job-analysis hypotheses are forgotten and the tests are chosen by statistics appropriate only to check hypotheses, not to evaluate tests. The extreme of this practice, setting up a hypothesis that Test X is positively related to job success and then, when statistics fail to support this hypothesis, giving the test a negative weight, is fortunately rare in public service testing. However, when several studies for one job are compared, it is usually apparent that the selected tests in each study were those that happened to have the highest validities, probably by chance.

PROCEDURE: This paper will describe how job analyses were used to set up and to test hypotheses as to aptitudes required for particular jobs. To avoid problems of curtailed distributions, norms based on previous studies with jobs that required particular elements were set in advance of data gathering. Since between-job variance for jobs with identical titles is often great, job titles were ignored.

RESULTS: As an example of a result, in 12 of 15 trades for which an alignment-dexterity test was considered relevant, the average job rating of subjects who would have met the norms was higher than that of "failures." Although results are sometimes not as striking as for conventional approaches, they are probably sounder, based on proper use of statistical checks of hypotheses. Tests intrinsically worth while are valu-

able in spite of low r 's. A test's value is determined by its relation to job requirements; the hypothesis is checked by statistics. Failure to support the hypotheses should lead to a reexamination of the job analysis rather than simply to the use of whatever tests happened to have the highest validities in the particular sample.

RATING RESEARCH IN GOVERNMENT AGENCIES

4:00-5:00 P.M., Tuesday, North Room, Mayflower

DAVID J. CHESLER, Chairman

4:00 P.M. Relative validity of ratings for groups of hard and easy raters. ABRAHAM H. BIRNBAUM, E. K. KARCHER, and YOLANDA A. CAMPBELL, *Personnel Research Section, AGO, Department of the Army.* (Sponsor, Abraham H. Birnbaum)

PROBLEM: In dealing with ratings of an efficiency evaluation program, the lack of uniformity in the standards of raters has long been considered a major problem. It is the purpose of this study (a) to identify those individuals who are hard or easy raters and (b) to determine the relative validity of ratings by the two groups.

POPULATION: Two groups, each of approximately 200 high-ranking Army officers attending an advanced Army school, completed about 20 associate ratings per rater on signed and unsigned eight-point graphic rating scales. One group also completed criterion rankings on the total population.

PROCEDURE: (a) The rater populations (the two groups separately) were divided into high, middle, and low thirds on the basis of the mean ratings given by the raters, with the thirds representing lenient, average, and hard groups of raters, respectively. (b) For each of the three rater groups of the two samples, the validity coefficients were computed for the individual and the average ratings received by the ratees. **RESULTS:** The analysis seems to indicate that there is no difference in the relative validity of ratings by hard and lenient raters. Further, no appreciable difference in validity was found between these rater groups and the total rater population.

4:15 P.M. Rater reaction to officer efficiency reporting methods. LOUIS P. WILLEMIN and DAVID J. CHESLER, *Personnel Research Section, AGO, Department of the Army.* (Sponsor, David J. Chesler)

PROBLEM: In anticipation of a revision of the current Officer Efficiency Report Form, a questionnaire was prepared to evaluate the acceptability of various types of rating form content.

POPULATION: The questionnaire was administered to

about 1,200 high-ranking Army officers. Selection of groups emphasized length and breadth of Army experience.

PROCEDURE: Separate sections of the questionnaire were concerned with differential duty assignment, performance of current duty, promotability, and overall value, with one or more proposed scales in each section. A section was added concerning possible use of check list items, both in *uncontrolled* check list form (rater may check as many items as are descriptive of the rated officer) and in *controlled* check list form (rater must select a designated number of items as being most descriptive). Opportunity was provided for the evaluation of each proposed scale on a structured 5-step acceptability scale, and also for the addition of unstructured comments. Structured responses were tabulated for all respondents; unstructured comments were analyzed on a large-scale sampling basis.

RESULTS: Except in the case of the promotability scales (all of which were of comparatively low acceptability), structured responses showed a general preference for the scales of the current form. Unstructured comments contained suggestions for improvement of these scales. The experimental form of a new Officer Efficiency Report Form incorporates the most important of these suggested changes, and replaces the current promotability scale with an entirely new one. There was general acceptance of an *uncontrolled* check list for the rating officer, but not for the indorsing officer. Less acceptance was found for a *controlled* check list. An *uncontrolled* check list was included in the new experimental form.

4:30 P.M. A study of cues used by raters in the rating of temperament requirements. SIDNEY A. FINE and JEWELL BOLING, *U. S. Employment Service*. (Sponsor, Sidney A. Fine)

PROBLEM: To determine if cues in job descriptions used by raters in the rating of temperament requirements can be used to achieve homogeneous concepts and interrater agreement.

SUBJECTS: Part I—10 raters; Part II—10 raters and 5 raters.

PROCEDURE: Part I: Fifty job definitions are selected as being representative of the population of occupations. The raters are provided with a selected list of temperaments based on factor analysis studies and procedures for rating temperament requirements from job descriptions. Included is the instruction to justify the ratings, i.e., to indicate what situations in the job description are the basis for the inferential judgment that a particular temperament is required for that job. After the ratings are made the following steps are carried out:

1. Study justifications made by raters to evaluate homogeneity of situations they used to justify trait ratings.

2. Interview raters who vary significantly from the group to determine cues used in making justifications.

3. Use justification and cue data to redefine factors and reinstruct raters.

Part II: 1. Using a comparable sample of 50 jobs, have the same 10 raters rate the jobs.

2. Also give second set of instructions to a new group of 5 raters not having the benefit of original experience.

3. Compare the distribution of ratings obtained in Part I with those obtained in Part II.

RESULTS: Results are presented to test the following hypotheses: 1. that cues used by raters are effective in redefining temperament requirements to achieve greater independence among them;

2. that interrater agreement is a function of the independence of the temperament requirements;

3. that interrater agreement improves as temperament requirements become more independent; inexperienced raters have more agreement with improved definitions than experienced raters with original definitions.

4:45 P.M. Reactions of two groups of Marine recruits relative to accepting a commission in the Marine Corps Reserve. EDWARD A. DOVER, *United States Marine Corps*.

PROBLEM: In certain instances Marine Corps Headquarters solicits the opinions of Marine recruits relative to some contemplated policy which concerns such recruits. Recently, for example, it was desired to learn the effect of imposing a specific tour of duty requirement upon the acceptance of a Marine Corps Reserve commission. Because the recruits most easily sampled were in training for only a matter of days, there was some concern over the validity of their reactions. In an effort to ascertain differences which might be due to unfamiliarity with military life, questionnaires were administered to two groups of recruits, one group having just begun basic training, the other having just completed their basic training.

SUBJECTS: 400 Marine recruits just beginning their basic training. 400 recruits just completing their basic training.

PROCEDURE: Because reactions of recruits who meet the basic requirements for commissioning are desired, instructions were issued to the recruit depot to select at random recruits whose General Classification Test scores were 120 and above and who met certain age requirements. These individuals were then administered brief questionnaires.

RESULTS AND CONCLUSIONS: It was found that the two groups of recruits sampled responded in much the same manner to the question of accepting a Marine Corps Reserve Commission despite the time differential in their training status. It appears, therefore, that recruits can be administered questionnaires shortly after their entry into basic training, and that their responses do not differ appreciably from responses given at a later date in their recruit training. This finding, of course, is dependent upon the type of material they are requested to comment upon.

PRESIDENTIAL ADDRESS AND BUSINESS MEETING

8:00 P.M., Tuesday, North Room, Mayflower

HERBERT S. CONRAD, Job Satisfaction of Psychologists in Public Service.

ROUND TABLE DISCUSSION GROUP: PROBLEMS OF A PRISON PSYCHOLOGIST

9:50-11:50 A.M., Wednesday, Pan-American Room, Statler

WILSON L. NEWMAN, Chairman

Participants: RAYMOND J. CORSINI, ARNOLD V. GOULDING, ROBERT W. HALLIDAY, GEORGE G. KILLINGER, ROBERT LINDNER, and IRWIN C. ROSEN.

INVITED ADDRESS

8:00 P.M., Friday, Williamsburg Room, Mayflower

THE HONORABLE ROBERT RAMSPECK, Chairman, U. S. Civil Service Commission. Psychology and Better Government.

DIVISION OF MILITARY PSYCHOLOGY

SPECIAL PROGRAM: OPPORTUNITIES FOR PSYCHOLOGICAL RESEARCH FOR THE ARMED SERVICES

AARON B. NADEL, Moderator

11:00-1:00 P.M., Monday, Williamsburg Room, Mayflower

Speakers:

DONALD E. BAIER, *Department of the Army.*

MEREDITH CRAWFORD, *Human Resources Research Office (Army).*

HOWARD E. PAGE, *Department of the Navy.*

CHARLES W. BRAY, *Department of the Air Force.*

SPECIAL MILITARY PROBLEMS

2:50-3:50 P.M., Tuesday, Chinese Room, Mayflower

HOWARD L. PARRIS, Chairman

2:50 P.M. Control of the administration of the Armed Forces Qualification Test to assure applicability of standardized norms. D. J. BOLANOVICH and N. R. LOVELACE, *Personnel Research Section, AGO, Department of the Army.*

PROBLEM: The Armed Forces Qualification Test (AFQT) is the basis for the establishment of mental standards to select personnel for military duty in the Armed Services. Therefore, the quality of manpower procured is, in part, a function of the current applicability of AFQT norms which were set when the test was standardized.

The problem of this study was twofold: (a) Determine whether operational testing conditions yield test scores which, when interpreted on the basis of standardized norms, significantly influence mental standards for the selection of manpower, and (b) where adverse testing conditions affect the validity of test results, to provide a basis for establishing and maintaining effective administrative control.

PROCEDURE: The distribution of AFQT scores obtained in the original standardization was compared with the distributions obtained for the selected sample in this study under the following conditions: (a) Administration of AFQT under operational conditions at induction and recruiting stations, and (b) administration of alternate AFQT form under standardized conditions at training divisions.

RESULTS: (a) The AFQT score distribution obtained under standardized conditions at the training divisions was the same as that obtained in the original standardization. (b) A pile up of scores occurred at the AFQT cut points in the distribution of scores obtained under operational conditions at the induction and recruiting stations. These results are supported by similar studies carried out by the Navy and the Air Force. Such a situation is not uncommon when cut points are used on selection tests. The net effect of the distortion of test results under operational conditions is to distort, in turn, the interpretation of operational scores. This condition could be corrected by either establishing new norms on the basis of operational score distributions, or continuing the use

of standardized norms but remedying operational conditions causing the distortion. The second procedure was considered the most stable and technically-sound means of correcting the situation. Administrative action was subsequently taken to improve testing conditions by training and assigning commissioned personnel psychologists to each examining station to supervise mental testing. A preliminary follow-up at one such examining station showed that distortions around the cut points had disappeared.

3:05 P.M. A method for content analysis of critical incident type interview data. ROBERT REVEAL, JR., *Psychological Services, Inc., and the University of Southern California*. (Sponsor, Floyd L. Ruch)

PROBLEM: To develop a procedure for analyzing the content of critical incident type interviews conducted with Air Force officers in a combat zone, to obtain material useful for selection, evaluation, and training. SUBJECTS: A representative sample of 562 Air Force officers, from Warrant Officer to Colonel, were interviewed at 15 Air Force Bases in Japan, Korea, and Okinawa.

PROCEDURE: Interviews were conducted individually with Air Force officers to get data on effective and ineffective leadership in a combat climate.

Extraction of behavioral statements from the interview data was performed by six judges using a rigid experimental design. Independent extractions were made by individual judges and conferences with three members were held to reconcile differences.

Inductive categorization of behavioral statements was conducted by two groups of three judges using random halves of the total population of statements.

By a design of exchanging cards (random halves) and exchanging the independently derived sets of categories between groups of judges, measures were obtained whereby category reliability, within sets, could be obtained.

Phi coefficients were computed between the two sets of categories to identify similar categories between sets. This information aided in the combination of all categories into one covering set of behavioral categories by all six judges.

RESULTS: 1. 1,034 behavioral statements were obtained from the 562 critical incident interviews.

2. From one set of 517 behavioral statements Group A judges derived 31 categories; Group B judges developed 25 categories from the other.

3. A combined set of categories was produced which gave more comprehensive coverage of the items and was more nearly unique.

CONCLUSIONS: A procedure was established for analyzing the content of Critical Incident interview

material which avoids many of the pitfalls and biases encountered in traditional content analyses.

This research was conducted under sponsorship of the Human Resources Research Institute, Research Project 21-05-028 PO-5, Contract AF 33(038)-23295.

3:20 P.M. Some concomitants of adjustive and non-adjustive reactions to basic training in the Air Force. MILTON B. JENSEN, *3700th Medical Group, Lackland AFB*.

At Lackland Air Force Base all basic trainees are evaluated in Medical Processing Service within three or four days of arrival. Evaluations are in terms of (a) mental disease, (b) social pathology, (c) mental deficiency, and (d) probability of success or failure in basic training.

Evaluations are based on (a) psycho-socio-medical data secured through the *Personal Report* devised at Lackland and *Report of Medical History*, Standard Form 89, (b) interviews by psychological assistants, psychologists, or psychiatrists, or a coordination of these, (c) abbreviated psychological testing as need is indicated.

In the present study the careers of 5,266 airmen (79 Flights) have been checked during and at the end of eight weeks of basic training. Data have been secured from the following sources: (a) Evaluations by tactical instructors (noncommissioned officers responsible for training at the flight level); (b) Psychiatric evaluations on those given psychiatric referral subsequent to initial evaluation and on those discharged for administrative reasons—inaptitude, mental deficiency, unadaptability, etc.; (c) Medical records of those who failed to complete basic training because of hospitalization or discharge for medical reasons; (d) Readministration of the *Personal Report* at the end of the basic training period of 684 airmen in 10 Flights; (e) End-of-basic-training interviews by psychological assistants, psychologists, or psychiatrists, or a coordination of these, of 93 airmen considered seriously maladjusted, either at the beginning of basic training, at the end of basic training, or at both times.

Reactions of the 5,266 airmen studied are categorized according to: (a) Normality or type of psychiatric disorder present; (b) Degree of psychiatric disorder when present; (c) Area of maladjustment when present; (d) Maintenance of adjustment; (e) Loss in adjustment; (f) Gain in adjustment.

Initial evaluations and predictions are compared with subsequent evaluations and with basic-training performances.

3:35 P.M. Measuring exposure to hazard. ROBT. F. SIMMONS and NEIL D. WARREN, *University of Southern California and Psychological Services, Inc.* (Sponsor, Neil D. Warren)

PROBLEM: Research on the relationship between characteristics of the pilot and aircraft accidents demands control of the amount of exposure to accident provoking conditions in the pilot's experience. The research being reported was designed to determine weights for the relative hazards of Air Force flying in different aircraft and under different flying conditions for the purpose of evaluating a pilot's exposure to accident hazard more accurately than total flying hours alone.

PROCEDURE: Complete records of Air Force flying including the number of accidents and the conditions under which they occurred were obtained for 35 models of aircraft for each of two six-month periods. Flights and hours for these aircraft were fractionated by night, day, and instrument conditions. Accident hazard was defined as the probability of accident and was measured by the slope of the line that best predicted accidents for flying by a group of similar aircraft in a given condition. The ratios of these slopes to a standard were used as the hazard weights for the group of models or for the condition of flight.

Weights from each six-month sample were applied to flights and hours of the other sample, and validity of the weighting procedure was measured by the increase in accuracy of predicting accidents.

CONCLUSIONS: Use of this technique of measuring and weighting hazards indicates that the best estimate of a pilot's exposure to hazard is the sum of his hours and flights multiplied by weights for types of aircraft and flying conditions in which he has flown. When the weights obtained in this study are applied to a population of aircraft, weighted hours plus landings account for as much as 85% of the variance in accidents between models while unweighted hours account for no more than 50% of this variance.

GROUP EFFECTIVENESS

4:00-5:00 P.M., Tuesday, Chinese Room, Mayflower

JOHN T. WILSON, Chairman

4:00 P.M. Personnel research in a combat area.

JOEL T. CAMPBELL and RICHARD H. GAYLORD, *Personnel Research Section, AGO, Department of the Army.*

PROBLEM: Until recently the Personnel Research Section, AGO had not been able to undertake research involving collection of on-the-spot criteria of combat performance. During World War II fears that personnel research in a combat area would interfere with

accomplishment of the combat mission had prevented approval of all proposals for such research.

However, after some experience with research operations during arctic maneuvers and as a result of increased Army interest in human resources research, permission was obtained to undertake a combat research program in Korea. In May 1951, a team of four Army officers and four civilian research psychologists was sent to Korea to obtain ratings of combat performance and, if possible, to administer a number of experimental tests. The team found that it was able to accomplish both objectives in considerably less time than had been expected without interfering with military operations.

By working with troops in reserve or in less active sectors of the front line, ratings were obtained on the enlisted men of three infantry regiments; involving approximately 5,000 men. The ratings were made by noncommissioned officers and were individually administered by one of the team members. Reliability of the ratings, from rater agreement, was .79. Two biographical information blanks and four experimental aptitude tests were administered to the enlisted men of two regiments. Scotopic and photopic visual acuity tests and three physical proficiency tests were administered to the men of one regiment.

To provide background information on the men rated and tested, the soldier's qualification card was photographed on microfilm.

For all infantry regiments in the Eighth Army, rating forms for company commanders, platoon leaders, and squad leaders were distributed through channels, with instructions to return the rating in a sealed envelope to the division Adjutant General. Approximately 90% returns were secured.

4:15 P.M. The application of measurement techniques to the evaluation of military group effectiveness. T. F. DUNN, B. T. JENSEN, H. L. McADOO, and E. K. KARCHER, JR., *Personnel Research Section, AGO, Department of the Army.*

PROBLEM: To develop techniques for the measurement of the end products of group effort.

DISCUSSION: The measurement of group achievement can be approached by considering the final products and accomplishments of a group as comparable to the observable achievement of an individual. Accordingly, an attempt was made to attain objectivity and reliability in subject matter coverage, administration, scoring, and evaluation of the achievement of groups in much the same manner as these attributes of measurement are realized in individual proficiency testing. Utilizing this approach a unit effectiveness test was developed and given a trial run in the field.

A manual on "How to Construct Tests of Unit Effectiveness" was then developed. In addition, a model test was constructed. The manual is divided into (a) the General Principles of Unit Evaluation, (b) Developing the Unit Problems and (c) Planning the Unit Test Administration. The Model Unit Effectiveness Test (UET) contains all of the principles, techniques, and instruments discussed and explained in the manual.

This paper will present material from the above developments to illustrate how the usual objectives of test construction were, for the most part, attained in unit effectiveness testing. Techniques for obtaining realistic test problems, systematic and controlled observation, standard recording of observations, and appropriate methods of arriving at the final evaluation of the unit will be discussed. Procedures for administering Unit Effectiveness Tests to large groups (approximately 200 individuals) will be reviewed. Possible methods for arriving at validity indices and reliability measures for UET will be suggested.

4:30.P.M. A comparison of three criteria of air crew effectiveness in combat over Korea. JOHN K. HEMPHILL and LEE SECHREST, *Ohio State University*. (Sponsor, John K. Hemphill)

PROBLEM: (a) To determine the characteristics of three criteria of air crew effectiveness in combat: superiors' ratings, sociometric nominations, and bombing accuracy; and (b) to determine the relationship among these criteria.

SUBJECTS: 94 B-29 air crews which flew combat missions over Korea in the spring and summer of 1951.

PROCEDURE: Superiors rated each crew as a unit on eleven variables. From one to five qualified raters judged each crew's performance. Sociometric nominations on the item "If you could make up a crew from among the crew members in your squadron, whom would you choose for each crew position?" were obtained from the crew members. From these nominations an index of "on-crew" vs. "off-crew" choice was computed. Average circular error bombing data from combat missions were obtained from official records. The distributions, reliabilities and inter-relationships among these three classes of criteria were analyzed.

RESULTS AND CONCLUSIONS: The estimates of reliability of the superiors' ratings ranged from .61 to .95. The reliability of the sociometric nomination data was estimated as .91. The bombing accuracy data yielded an extremely low estimate of reliability which was not significantly different from .00. Despite the low reliability of the bombing data, superiors' ratings showed substantial (.30 to .70) correlation with the recorded bombing accuracy of the crews. The socio-

metric data also showed a statistically significant correlation of .36 with the bombing data. The inter-relationships among these criteria raised a question concerning the possible contamination of rating criteria by "objective" information of low reliability. (Slides)

4:45.P.M. A comparison of personality constellations identifying high performance groups versus low performance groups of company grade Army officers based on psychologically-derived criteria and Army-derived criteria. MILTON H. IREDELL, *Personnel Research Institute of Western Reserve University*.

PROBLEM: The present study is an extension of the research contract, "Psychological Requirements Analysis of Company Grade Officers." The study reported here was done to determine the personality differences as indicated by research interview findings between high performance and low performance groups based upon two criteria: (a) a psychologically-derived criterion, and (b) an Army-derived criterion. The study incorporates the substantiating behaviors upon which the personality inferences are based.

SUBJECTS: 72 company grade Army officers from three infantry regiments. In addition, a subordinate and superior were interviewed for each officer in the sample.

PROCEDURE: A psychologically-derived criterion was constructed using all ratings made by the psychologists conducting the study. High and low performance groups were established on the basis of this criterion. A composite criterion score based upon superior officer ratings was secured from the Army on each man in the sample. High and low performance groups were established on the basis of this criterion. Personality variables of the officer in each of the high and low performance groups were identified and comparisons were made between the four groups.

RESULTS: Comparison of the four groups (two high and two low performance groups) indicates that there are definite personality differences in the groups as indicated by the research interview findings. The differences between each group are discussed.

ENGINEERING PSYCHOLOGY I

4:00-5:00 P.M., Tuesday, Pan-American Room, Mayflower

J. W. GEBHARD, Chairman

4:00 P.M. The effect of age and experience on direction of movement stereotypes. CHARLES W. SIMON and PAUL M. FITTS, *Ohio State University*.

Numerous studies have shown that performance in perceptual-motor tasks benefits if the direction of movement of the indicator agrees with that of the control. However, when rotary controls and circular indicators are used, their relationship can be interpreted by the operator along either linear or curvilinear dimensions. From both a theoretical and a design standpoint, it is desirable to know which interpretation predominates. The present experiment was designed to test the hypothesis that a linear interpretation is dominant at an early age, but with increasing subject sophistication, i.e., age and experience, an alternative curvilinear interpretation develops and influences behavior simultaneously.

To test this hypothesis, six populations were used. Forty male graduate engineering students, 40 male undergraduate psychology students, 40 female undergraduate psychology students, and 40 fifth-grade boys and girls were given a paper and pencil test of 32 motion relationship problems of the type described, with the display located in different locations and positions about the knob. In addition, 40 five-year-old boys and girls, unable to master the paper test, were given wooden models representing half of the 32 problems and 40 additional male psychology students operated these models as a control. Some of the configurations were such that the two interpretations will lead to opposite responses; analyses of the subjects' behavior indicated the dominant one.

The degree of behavioral stereotypy varied markedly for different display configurations. Age and experience showed a systematic effect on the degree and type of stereotyping. With increasing sophistication, there was an increasing shift from the type of response predicted by a linear interpretation to that predicted by a curvilinear one. These and other results are discussed in detail. Some design principles are suggested. (Slides)

4:15 P.M. The effect of "speed" and "load" on display-control relationships. WILLIAM B. KNOWLES, WILLIAM D. GARVEY, and EDWARD P. NEWLIN, *Naval Research Laboratory*.

PROBLEM: In a previous experiment two displays were paired with two controls. The efficiencies of the four display-control combinations were measured in terms of mean response latency. This experiment showed that a poor display may be made more efficient by combining it with the proper control even though this control may be, in general, a poor one. In the present experiment the variables of "speed" (the rate of informational presentation) and "load" (the number of stimulus alternatives) were manipulated to determine their effect upon the relative efficiencies of the same display-control combinations.

SUBJECTS AND PROCEDURES: 8 Naval enlisted men were used as subjects in a latin square design. Two conditions of "load," 4.4 and 6.6 bits per stimulus, and four conditions of "speed," 1.75, 2.25, 2.75 and 3.00 bits per second, were imposed on the four display-control combinations. Each *S* received one trial of 100 stimuli on each of the experimental conditions. Efficiency was measured in terms of errors per 100 stimuli.

RESULTS AND CONCLUSIONS: The results showed that the display-control combinations of the first experiment maintained their same relative efficiencies at all speeds. However, increasing speed produced an increasing disparity between the poorest and best conditions.

With each display-control system, decreasing the "load" decreased the number of errors when the rate of stimulus presentation (stimuli/second) remained constant. However, when the rate of informational input (bits/second) remained constant there were no significant differences in errors attributable to "load."

A further comparison of the results of the first experiment with the present one showed that when subjects respond at their own rates of speed they handle significantly more information per second than when forced to respond at the same rates. (Slides)

4:30 P.M. An investigation of variables related to operator "set" in the process of communication. RICHARD H. HENNEMAN and EUGENE R. LONG, *University of Virginia*.

Under a research contract with the U. S. Air Force the authors and L. S. Reid have begun a systematic investigation of "set" as a determiner of human operator efficiency in air-ground communication.

PROBLEM: Communication is assumed to be a message (stimulus)—response process in which the operator is required (a) to identify messages correctly (discrimination responses), and (b) to carry out instructions contained in the message (instrumental responses). Efficiency of communication is thus measurable in terms of probability of response occurrence, which in turn is partly attributable to such organismic factors as proficiency level, fatigue, or "set." Sensory set or *expectancy* appears to apply to message identification, while motor set or *intent* refers to message execution. "Setting" the individual is assumed to involve a restriction of his responses, such restriction being variable both in degree and in type (e.g., stimulus similarity). It is logical to predict that "set" would have its greatest influence when messages are highly ambiguous.

SUBJECTS: 96 male college students.

PROCEDURE: The first experiment on "set" was confined to message identification, i.e., recognition of

visually distorted letter patterns. Response restriction was achieved by limiting the number of alternative letters in random fashion (4, 6, 8, and 11). Experimental variables were (a) degree of response restriction, (b) degree of letter distortion, and (c) temporal position of the "setting" information (i.e., before and after stimulus presentation). The experimental design called for a $4 \times 4 \times 2$ matrix of cells, with three subjects to a cell.

RESULTS: An analysis of variance performed on the resulting data revealed that number of response alternatives, degree of stimulus distortion, and the interaction between these two variables significantly affected the number of correct recognitions. "Setting" both before and after stimulus presentation produced no more correct recognitions than did post-setting alone. Further experiments are in progress. (Slides)

4:45 P.M. An experimental approach to an operational problem: The comparison of two plotting systems. JOSEPH W. WISSEL, ROBERT J. SCHREIBER, and MARTIN A. TOLCOTT, *Dunlap and Associates, Inc., Stamford, Conn., New York, N. Y.*

PROBLEM: To compare the effectiveness of plotting systems in terms of the plotters' capacities.

SUBJECTS: 20 trained Navy plotters.

PROCEDURE: Two plotting systems were to be compared; each required plotters to register range and azimuth of the contact on a vertical plotting board and connect the fixes to form tracks. The course and speed of the aircraft were computed by a different method in each system.

The experimental variables under consideration were track load and data rate. Track load was varied from A to D tracks in equal intervals. (Track loads and data rates cannot be given for security reasons.) Data periods were either *n* or *m* minutes, and the per cent of targets reported at each rate was varied in intervals of 25%.

Sixteen one-half hour scripts were prepared with the assistance of Navy personnel, and recordings of the scripts were played to the plotters over standard Navy telephones.

RESULTS: The primary data are the discrepancies between the plotted and true positions of the fixes, the differences between computed and plotted courses and speeds, the times to plot fixes, and the number of fixes omitted. These data were obtained for both systems. For security reasons, detailed results cannot be presented.

Positively skewed distributions of absolute plotting errors were found. Magnitude of the mean and median plotting error did not increase with data rate. From an analysis of fixes omitted, it was shown that plotters

never plotted more than *Q* fixes per minute in either system. Number of courses and speeds computed per track was compared for track loads and systems. As the track load increased, the number of courses and speeds computed per track rapidly decreased. Errors in computation of course and speed were compared. As the number of fixes per minute increased, time to plot decreased to *t* seconds and thereafter remained constant. The data may be directly applied to the design and use of plotting systems aboard ship.

CONCLUSIONS: This study indicates that the variables of many operational problems can be controlled for experimental study. The results of the study of this operational problem may be directly applied to the design of shipboard systems without extrapolation.

The authors gratefully acknowledge the assistance of Mr. Vincent Sharkey, Human Engineering Branch, Special Devices Center, Office of Naval Research, and Mr. Dixon Burdick, Code 565c, Bureau of Ships. This research was performed under Contract N8 onr-641, Task Order 3, between Special Devices Center, Office of Naval Research and Dunlap and Associates, Inc. (Slides)

BUSINESS MEETING

5:00-6:00 P.M., Tuesday, North Room, Mayflower

ENGINEERING PSYCHOLOGY II

8:40-9:40 A.M., Wednesday, North Room, Mayflower

SHERMAN ROSS, Chairman

8:40 A.M. Transfer of skill between compensatory and following tracking tasks. RUSSEL F. GREEN, BURTON G. ANDREAS, and S. D. S. SPRAGG, *University of Rochester.*

PROBLEM: To determine the direction and amount of transfer effect between compensatory tracking and following tracking. This study is part of a research program on human motor performance, sponsored by Special Devices Center, ONR.

SUBJECTS: 92 young adult males divided into four groups (*N* = 23 for each).

PROCEDURE: The Ss in Groups I and III were given 8 one-minute trials on a following tracking task (modified SAM Two-Hand Coordination Task) with the display-control movement relationships such as to provide optimal or "natural" relationships (as determined by previous studies from this project). They were then given 8 one-minute trials on a compensatory tracking task (modified SAM Pursuit Task), Group I with the display-control movement relationships which had been found previously to be optimal or "natural" for following tracking, and Group III with

the opposite ("unnatural") display-control relationships.

Groups II and IV received 8 one-minute trials on the compensatory tracking task, Group II with the display-control relationships which had been found previously to be optimal or "natural" in following tracking and Group IV with the opposite ("unnatural") relationships. Both groups were then given 8 trials on the following tracking task, using the optimal or "natural" display-control movement relationships.

The principal measure of performance analyzed was time on target.

RESULTS AND DISCUSSION: The results indicate a zero-order net transfer effect from compensatory to following tracking. There was significant positive transfer effect from following tracking to compensatory tracking only for Group III (for whom the display-control movement relationships in compensatory tracking were opposite to those previously found optimal for following tracking). Implications of these results will be discussed. (Slides)

8:55 A.M. The range effect as a function of frequency, number and range of step-function stimuli. CHARLES W. SLACK, *Princeton University*. (Sponsor, William H. Ittelson)

PROBLEM: In the study of one-dimensional hand pursuit movements in response to instantaneous (step-function) movements of the stimulus, it has been observed that a tendency to overshoot smaller steps and undershoot larger steps exists (SEARLE, L. V. and TAYLOR, F. V., *J. exp. Psychol.*, 1948, 38, 615-631) and that this depends not upon the absolute magnitude of the step but upon the range of inputs (ELLSON, D. G. and WHEELER, L., AAF Technical Report No. 5813, Serial No. MCREXD-694-2P). It is the purpose of these experiments to determine in what way the Range Effect varies as a function of the rate of presentation of the steps and number of intervening steps before measurement takes place.

APPARATUS: Modified Brush Recording Oscillograph with pens removed: a paper-feed mechanism with a viewing slit. The S's pencil records his own responses. **SUBJECTS:** Princeton undergraduates, male.

RESULTS: The Range Effect (as measured by the straight line of best fit to the magnitude of the responses initially made by the subjects before correction) increases as the rate of presentation of the steps increases. The effect of an outsized step (or a number of outsized steps) falls off rapidly as the number of intervening steps increases.

CONCLUSION: Implications for a mathematical theory of the Range Effect will be discussed. (Slides)

9:10 A.M. Target size as a cue to distance in binocular stereoscopic range finding. EARL A. ALUISTI and GEORGE S. HARKER, *Army Medical Research Laboratory, Fort Knox, Kentucky*.

PROBLEM: A recent publication claims that size operates as a cue to distance in such a manner that a familiar object is localized at the point at which an object of physical size equal to the assumed size would have to be placed in order to produce the given retinal size. Thus it appears possible that a difference between the observer's assumed size and the target's physical size could be a source of the "psychological bias" evidenced in binocular stereoscopic range finding.

SUBJECTS AND PROCEDURE: All distance cues were controlled except the size of target (independent variable) and the binocular disparity-convergence complex (dependent variable). Targets of three physical sizes were used: twice, unit, and half-size photographic reproductions of a bridge-size playing card. The ranging apparatus was a stereoptometer. The experiment was conducted in two phases.

During the first phase, data were collected from 24 male Ss. Two series of rangings "without knowledge" were made by each S on each card size. The targets were suspended at a physical distance of 3,020 mm.

During the second phase, data were collected from 12 male Ss. Two series of rangings were made by each S on each of six card size-distance combinations. The Ss ranged on four targets "with correct knowledge," and on the remaining two targets "with erroneous knowledge."

RESULTS: 1. In phase I, the large card was ranged in the theoretically predicted *direction* 36 times in 48 ($p < .0005$); the small card 19 times in 48 ($p > .9030$). The absolute differences between the means were not significant.

2. In Phase II, the mean rangings "with correct knowledge" occurred in the theoretically predicted *direction* 31 times in 48 ($p < .0305$); those made "with erroneous knowledge," 30 times in 48 ($p < .0565$). The absolute differences between means for targets suspended at the same physical distance were not significant.

3. Including both phases, these differences ranged from 5 to 71 mm.

CONCLUSION: The indications are that target size is an insignificant cue to distance in binocular stereoscopic range finding.

9:25 A.M. Binocular summation of geometrical patterns as a range indicator. GEORGE S. HARKER, *Army Medical Research Laboratory, Fort Knox, Kentucky*.

PROBLEM: The present study was undertaken to check the possibility of utilizing reticle configurations other than the conventional stereo-reticle in the stereoscopic range finder. Three reticle configurations were used: a stereo V and two geometrical summation patterns designed to utilize the "Nonius" principle of horopter determination. One of the latter was a "wheel" with oblique summation elements within a circular stereo element, the other a "bouncing ball" consisting of a pair of dots vertically displaced and presented alternately twice per second.

SUBJECTS AND PROCEDURE: Experiment I: Twenty-seven naive Army Ss ranged on six targets under field conditions in a counterbalanced order with the three reticles. The data were obtained over a ten-week period in three half-day sessions per S. Experiment II: Twelve practiced Army Ss ranged on one target under laboratory conditions with two reticles, the stereo V and the "bouncing ball." The data were obtained over a two-day period in four fifteen-minute sessions per S.

RESULTS: Experiment I: An analysis of variance of the performance scores (standard deviation of ten rangings) indicated the "wheel" to be distinctly inferior to both the "bouncing ball" and the stereo V. An analysis of variance of the performance scores with the stereo V and the "bouncing ball" indicated no detectable over-all performance difference. For selected targets, *t* tests indicated the "bouncing ball" was superior to the stereo V in its ability to enter an obstructed area. Experiment II: A *t* test of the differences between the performance scores (standard deviation of fifteen rangings) with the stereo V and the "bouncing ball" indicated the stereo V to be markedly superior. Mean performance levels in seconds of arc were: Exper. I, "wheel" 284, "bouncing ball" 170, stereo V 172; Exper. II, "bouncing ball" 117, stereo V 28.

CONCLUSIONS: The use of a binocularly summated geometrical pattern as a range indicator is possible. The presentation of a unique image to each eye makes possible the ready communication of the "on target," "short," and "long" configurations. The failure of a person to obtain a complete reticle configuration indicates immediately his inability to use the reticle.

EVALUATION OF METHODS AND DEVICES

9:50-10:50 A.M., Wednesday, Pan-American Room, Mayflower

PHILIP H. MITCHELL, Chairman

9:50 A.M. Optimum utilization characteristics of the Telekit. PHILIP ASH and NATHAN JASPEN, *Inland Steel Company and National League for Nursing Education.*

PROBLEM: The training value under various conditions of use of a rear-projection small size (12" × 18") daylight screen was studied. The experimental variables included (a) rate of development of film demonstration, (b) repetition of the film demonstration, (c) concurrent participation with the film demonstration, (d) level of ambient illumination, (e) angle of view of screen, and (f) distance from screen.

SUBJECTS: Approximately 2,000 Navy trainees at the Great Lakes Naval Training Station participated.

PROCEDURE: 1. A complete factorial design employing two levels of variables *a* through *d* (slow vs. fast rate of development, one vs. two demonstrations, participation vs. no participation, daylight vs. dark illumination), plus a third level of repetition (three demonstrations) for the *fast* sequence, was used to test the main effects and interactions among these four variables.

2. Angle of view and distance from screen were studied under both daylight and dark conditions with all other conditions constant.

The film used demonstrated the assembly of the breech block of the 40-mm. anti-aircraft gun. It was produced in the versions (fast and slow, one, two, three demonstrations) required by the design. Several groups of Navy trainees were shown the appropriate version under each set of conditions. Immediately after the film, each trainee attempted to assemble a breech block. Pass-fail and time scores were collected. **RESULTS OR CONCLUSIONS:** Rate of development of the film and number of repetitions had large significant effects on performance. Rate of development interacted significantly with all other variables. The level of ambient illumination interacted significantly with angle of view and distance from screen: outside an optimum viewing area 30° wide and 18 feet deep, daylight viewing conditions resulted in sharp performance losses, while within the optimum viewing area daylight conditions were slightly more favorable than dark viewing conditions.

The research on which this paper is based was conducted under Contract N6onr-269, Task Order VII with the Special Devices Center of the Office of Naval Research.

10:05 A.M. An inventory of experiences as a survey and classification instrument. ELIZABETH P. HAGEN and ROBERT L. THORNDIKE, *Teachers College, Columbia University.*

Under an Air Force contract, an experience record, a questionnaire type of inventory, was developed to survey civilian vocational and avocational experiences indicative of skills significant to the military establishment.

The Experience Record contained 292 items. Thirty-one were lead items identifying clusters of activities, e.g., "Have you built, repaired, or installed any type of electrical or electronic equipment?" The remainder were specific activities within the clusters, e.g., "Have you tested and installed radio or television sets?" The items were related to activities in approximately 150 different jobs primarily at the skilled occupational level. Various levels of participation in the activities could be indicated.

The Record was administered in the spring of 1951 to three groups: (a) 1,772 males, aged eighteen and over, drawn from Centre County, Pennsylvania; Springfield, Mass.; Washington, D. C.; and New York, N. Y., tested at their residences; (b) Several subgroups of men currently employed in one specific field of work covered in the blank, tested at their place of employment; (c) airmen entering the Air Force, tested at Lackland Air Force Base.

Testing at residence units proved quite practical, more than 90% of those reached cooperating. Typical response frequencies will be reported to indicate the type of evidence this survey gives of the reservoir of job experience and skill.

Items generally showed high "validity," in that they discriminated sharply between those working in a given job and the general adult population.

Many of the skills appear to yield distinctive age and geographical patterns of distribution.

Though most current draftees and volunteers are too young to have an extensive job history, enough appears in their responses to suggest that this type of inventory might be a useful adjunct to classification and assignment.

Further possibilities for research on the instrument and its use in the event of mobilization will be discussed.

10:20 A.M. Some methods for studying the utilization of training aids. MORTIMER FEINBERG and HAROLD A. EDGERTON. *City College of New York, School of Business Administration, and Richardson Bellows Henry & Co.*

PROBLEM: Since World War II, there has been a marked growth in the development and use of training aids. They have increased in variety and complexity but frequently as Dael Wolfle indicates this phenomenal growth has been based more on "enthusi-

asm than on evidence." (WOLFLE, DAEL. Training. In S. S. Stevens, Ed., *Handbook of Experimental Psychology*, New York: Wiley, 1951.) This report will be concerned with an outlining of the procedures involved in a systematic evaluation of training aids.

SUBJECTS: This research was conducted under contract with the Special Devices Center of the Office of Naval Research. The subjects included students and instructors from the Marine Supply School at Camp Lejeune, North Carolina, and the Naval Air Technical Training Center at Memphis, Tennessee.

PROCEDURE: As was the situation in the present study, it is frequently impossible in a large military installation to disrupt the normal training program in order to institute the controls required for an experimental evaluation. Therefore an alternative procedure was necessary for the systematic study of the effectiveness of a particular training device.

Three measures were constructed to record the opinions of students and instructors involved in the use of a given training aid. These are: The Student Interview Blank, the Instructor Interview Blank, and a Special Devices Center Office of Naval Research Questionnaire. In addition an Observer Check List was devised to record the judgments of psychologists serving as observers during classroom demonstrations of the device. Administration, quantification, and interpretations of these instruments will be described. RESULTS AND CONCLUSIONS: A technique for systematically studying the efficiency of use of training aids had been developed by means of four psychometric instruments. Their combined findings have provided the basis for recommendations regarding structural modifications in the training devices as well as for improvement in instructional techniques. These evaluation techniques can be modified to meet the needs of particular training installations and should prove of value in both military and civilian programs. (Slides)

10:35 A.M. An analysis and evaluation of driving safety posters. HARRY J. OLDER and FRANK E. MANNING, *Institute for Research in Human Relations, Washington, D. C.* (Under contract with the Human Resources Research Laboratories, U. S. Air Force.)

PROBLEM: To analyze the content, appeal, and impact of driving safety posters and to determine the characteristics of effective posters and display practices. SUBJECTS: 348 motor vehicle operators assigned to the motor vehicle squadron of 10 Air Force bases and the Ground Safety Officers at each base.

PROCEDURES: Four measures were obtained on 18 posters, two of airmen opinions (ratings and nominations) and two of poster impact (recognition and

aided recall). Ranks on the four measures for each poster were then combined to yield a composite score. Correlations between the four different measures and the composite were calculated.

Factors which might relate to poster effectiveness were hypothesized. Correlations between these factors and the composite poster scores were computed to reveal the characteristics of the high and low rated posters.

The analysis of poster display practices was accomplished by interviewing those responsible for displaying the posters, i.e., the Ground Safety Officers and by observing and evaluating poster display areas.

RESULTS: Correlations between the two opinion measures were high and correlations between the two impact measures were high. Correlations between the impact and recall measures were, however, low.

Among the factors which were found to characterize the high rated posters were: Small number of letters in a type face which is easy to read at maximum distance, margin, multicolored with bright, vivid, and realistic colors, no more than 25% white space, presence of people.

The following factors were judged to be related to effective poster display: (a) proper illumination; (b) position for clear view; (c) nearness to center of activity; (d) exploitation of potential viewers; (e) good background—minimum distraction or confusion; (f) good over-all impact of display.

SYMPOSIUM: TRENDS IN MAN-MACHINE SYSTEMS RESEARCH

11:00-1:00 P.M., Wednesday, Ballroom, Mayflower

FRANKLIN V. TAYLOR, Chairman

Participants:

PAUL M. FITTS. Recent developments in empirical human engineering research.

MELVIN J. WARRICK. The current status of the servo theory approach to tracking behavior.

WILLIAM J. MCGILL. The information handling capacity of the human.

MILTON G. WEINER. New approaches to communication network research.

Discussants: WILLIAM E. KAPPAUF and ROBERT L. CHAPMAN.

PROBLEMS IN SELECTION

2:50-3:50 P.M., Wednesday, Chinese Room, Mayflower

DENZEL D. SMITH, Chairman

2:50 P.M. The significance of attitudes toward authority-figures in discriminating between Naval

Aviation Cadets of "high" and "low" motivation. JOHN T. BAIR and EDWIN P. HOLLANDER, U. S. Naval School of Aviation Medicine, Pensacola, Florida.

PROBLEM: To evaluate significance of attitudes toward authority-figures in discriminating between Naval Aviation Cadets of "high" and "low" motivation. The "authority-figures" considered were officer-instructors in Naval Air Training. Motivation was defined in operational terms, i.e., the extent to which the Cadet manifested behavioral signs of desiring to remain in training.

SUBJECTS: The study groups consisted of: Group A ("high" motivation) composed of 65 successful Cadets, and Group B ("low" motivation) made up of 72 Cadets who withdrew at their request. The groups were similar with regard to age, but Group B had a higher mean-level of education.

PROCEDURE: Both groups were asked to complete an open-ended, anonymous questionnaire which required they describe a sample of behavior which characterized their "best" instructor and their "worst" instructor. Responses were then coded so that subsequent analyses might be undertaken without knowledge of the respondent's group in the sample. Categories of behavior associated with *favorable or unfavorable attitudes* were derived from the data by content analysis. A determination of the disposition of each case with regard to the specific categories was made and checked for reliability by four independent raters. The frequency of responses were determined within each content category for both groups. The chi-square test was used to compute significance of differences between groups.

RESULTS: Significances at the two per cent level and below were found between the two groups toward their "best" and "worst" instructors.

CONCLUSIONS: Attitudes toward behavior of their officer-instructors appear to differentiate significantly between Cadets of "high" and "low" motivation. Specifically, Cadets of "high" motivation tend to place a higher value on *interpersonal relationships* with officer-instructors. Cadets in the "low" motivation group stress *instructor competence*. Certain other implications are drawn with respect to cadet identification with authority-figures as a factor in motivation within a military setting.

3:05 P.M. Prediction of success at the U. S. Naval Postgraduate School. WILLIAM G. MOLLENKOPF, Educational Testing Service.

PROBLEM: Development of a test to aid in selecting students for the U. S. Naval Postgraduate School.

SUBJECTS: Officers in three entering classes at the Postgraduate School: 1948 ($N = 145$), 1949 ($N = 126$), and 1950 ($N = 158$).

PROCEDURE: Three experimental test batteries were administered at the School in the summers of 1948, 1949, and 1950. The first battery contained measures found previously to be good predictors of engineering achievement (e.g., mathematical aptitude), and also measures of visualization, verbal and nonverbal reasoning, and word fluency.

A preliminary validation was made against quality-point ratios for the first year. Findings influenced the content of the second battery, in which were included revised forms of some tests plus several new experimental tests. Similarly the third battery was based upon results from the first two batteries, and afforded a further check on promising results for certain tests given in earlier batteries. Validation of measures was continued into the second and third year of postgraduate study.

In the second and third batteries, provision was made in most tests for securing reliability estimates from correlations between scores on separately timed parts. Multiple correlation techniques, including a new test-selection procedure developed by Horst, were employed.

RESULTS: Scores on five tests given in 1948 correlated above .50 with first-year quality-point ratios, and were also found significantly predictive of success in the second and third years. Revised forms of these tests given in 1949 and 1950 yielded similar results. Of the new tests tried out in 1949, two tests getting at interpretation of scientific materials were found highly predictive both in 1949 and 1950.

As an outcome of the three-year period of research, a five-part test emphasizing mathematical and scientific abilities was developed, and is now in operational use in the Navy Department.

3:20 P.M. Effect of equalitarian atmospheres upon the performance of bomber crews. STUART ADAMS, *Ohio State University*. (Sponsor, John K. Hemphill)

PROBLEM: To investigate the relationship between "equalitarian" attitudes displayed by officer members of B-29 crews and the performance of the crews during training.

SUBJECTS: 42 bomber crews, making up five classes which were trained and evaluated at MacDill Air Force Base in 1950 and 1951. Each crew consisted of 5 officer and 6 airmen crew members.

PROCEDURE: As part of a larger testing program, incomplete sentences blanks were given to members of the bomber crews. The blanks included a number

of stems designed to elicit attitudes toward structure of status and authority. Officer attitudes were assumed to be the primary determinants of the atmosphere of the crew; hence officer responses to the critical stems were used as indicators of the degree of equalitarianism or authoritarianism existing on the crew. Panels of judges classified the officer responses into pertinent categories, and crew indices of atmosphere were constructed.

RESULTS: Coefficients of reliability of agreement on responses to the seven critical stems ranged from .65 to .95. Significant differences were found between crews in the number of equalitarian responses obtained on the stems. In a class consisting primarily of below-average crews, a moderate correlation (.38) was found between equalitarian atmosphere and instructor rating on "present value to the Air Force." A second class of relatively good crews showed a correlation of .40 between authoritarian atmosphere and rating on present value. These findings suggest the hypothesis that tolerance for authoritarian atmospheres on bomber crews is related to the level of training and quality of performance of the crews.

3:35 P.M. The validity of a measure of military attitude for prediction of Air Force success. JAMES K. YARNOLD and ERNEST C. TUPES, *Human Resources Research Center, Lackland AFB*. (Sponsor, Ernest C. Tupes)

One test in the Air Force experimental testing program is an attitude survey composed of items which reflect attitudes toward various aspects of military service. This test was originally constructed on the assumption that military attitude (morale) is related to success in military service. It is the purpose of this paper (a) to compare the scoring keys developed from the different forms of the attitude survey and (b) to demonstrate the predictive value of this test for Air Force success.

Several forms of this attitude survey have been developed on the basis of equivalent content, differing only in length and item wording. Two of these (Forms A and B) were developed for administration to airman subjects; the others (Forms A/C and SX-AS-A) were developed for administration to aviation cadets and officer candidates, respectively.

An a priori morale key specifically designed for Forms A and B was developed and refined on the basis of internal consistency. This key was then demonstrated to have significant validity for independent ratings of morale. Because of a hypothesized high relationship between morale and success in aviation cadet and officer training, it was decided to attempt the development of empirical keys designed

to predict success in these areas. These empirical keys were found to have significant cross validity on subsequent samples for graduation/motivational elimination in basic pilot training and pass/fail in Officer Candidate School. The two empirical and the morale keys were then intercorrelated. These coefficients ranged from .75 to .82, thus indicating that all keys are measuring essentially the same thing even though developed against three experimentally independent criteria.

Cross validation of the attitude survey keys has demonstrated significant predictive value for various measures of Air Force success, namely, airman job performance ratings, successful/unsuccessful adjust-

ment to basic training, graduation/motivational elimination from basic pilot training, and graduation/elimination from Officer Candidate School.

SYMPOSIUM: FLIGHT SIMULATORS: TRAINING USES AND RESEARCH POSSIBILITIES

1:40-3:40 P.M., Thursday, Chinese Room, Mayflower

PHILIP H. DuBOIS, Chairman

Speakers: ROGER M. BELLOWES, JOHN C. FLANAGAN,
DONALD E. SUPER, HARDY C. WILCOXON, and
ALEXANDER C. WILLIAMS, Jr.

DIVISION ON MATURITY AND OLD AGE

MEETING OF JOINT COMMITTEE OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Tuesday, Jefferson Room, Mayflower

VICTOR H. NOLL, Chairman

BUSINESS MEETING

9:50-11:50 A.M., Wednesday, Cabinet Room,
Mayflower

JOINT MEETING OF NEW PROGRAM CHAIRMEN OF DIVISIONS 5, 7, 12, 15, 16, 17, AND 20

1:40-3:40 P.M., Wednesday, Jefferson Room,
Mayflower

PSYCHOPHYSIOLOGICAL ASPECTS OF AGING

1:30-2:30 P.M., Friday, Presidential Parlors, Willard

(Co-sponsored with the Gerontological Society.)

JAMES E. BIRREN, Chairman

1:30 P.M. The pupillographic study of the psychosensory restitution and aging. LILLIAN S. KUMNICK and HENRYK MISIAK, *Fordham University*.
PROBLEM: Investigation of the possible changes occurring in the psychosensory restitution with age. The extent of psychosensory restitution indicates the effectiveness of psychological stimulation as shown by the response of the autonomic nervous system. It is important to know whether the process of aging alters autonomic activity as evidenced by pupillary responses. If changes do occur in this phenomenon

with age, it may serve as a useful tool in gerontological studies.

SUBJECTS: 94 white Ss ranging in age from 7.5 to 90.8 years formed four age groups. Neurological and eye examinations were given prior to pupillography. PROCEDURE: Pupil was photographed by means of infrared cinephotography as it constricted and dilated in response to light stimulations presented at a constant rate. After sixty stimulations, when the pupil lost its mobility and remained constricted even during dark phase, a sound stimulation was presented and brought again dilation of pupil, i.e., restitution of response. Pupillograms were made from the films and the pupillary changes were measured.

RESULTS: Significant differences in the responses of the rested, fatigued and restituted pupil between the young and old group were found. The relationship between age and the size, speed of response, and restitution of the pupil was linear and negative.

CONCLUSIONS: Psychosensory restitution occurs in all the age groups; there are significant changes in this phenomenon with age; a shift toward the dominance of the parasympathetic nervous system is indicated. (Slides)

1:45 P.M. The relationship between critical flicker frequency and chronological age for varying levels of stimulus brightness. NEIL W. COPPINGER, *VA Center, Wadsworth, Kansas*.

The purpose of this research was to establish the functional relationship between foveal CFF and age under different conditions of stimulus brightness.

One hundred and twenty white males, ranging in age from 20 through 79 years, were selected from the patient population of two hospitals. They were

screened for physical diseases known to alter CFF and were free of gross visual defects.

The stimulus light was produced by an episcotister with a 1:1 light-dark ratio. The light system was operated on direct current. The stimulus field was a square of diffused constant light in the center of which was a circle of intermittent light. The total stimulus field subtended a visual angle of 1 degree, 56 minutes. CFF was defined as the average of four ascending and four descending judgments at each of four levels of stimulus brightness.

The functional relationship between foveal CFF and age was found to be linear and negative. The form of this relationship has all of the characteristics of the decrement in the curves which describe the relationship between age and other sensory and motor functions. The rate of decay of the CFF-age curve increases when the level of stimulus brightness is increased. The slopes of the foveal CFF-log brightness curves are less accelerated in older subjects and add further evidence that the extent of the age decrement in CFF is dependent upon the level of stimulus brightness at which the measurements are made.

Since many of the physiological changes associated with aging are qualitatively similar to diseased and artificially induced conditions which lower CFF in young persons, a single factor explanation for the physiological mechanism underlying the decrement of CFF among older persons is meaningless. To understand properly how this decrement occurs research must be directed toward uncovering the extent to which one organ-system alteration contributes to the total decrement.

2:00 P.M. The electroencephalogram of normal male subjects over age sixty-five. WALTER D. OBRIST, *Moosehaven Research Laboratory, Orange Park, Florida.*

PROBLEM: To determine the nature and extent of age changes in the electroencephalogram during senescence.

SUBJECTS: 150 male residents of Moosehaven between the ages of 65 and 95 served as Ss. They were of average physical health for that age. Persons with serious neurological or psychiatric disorders were not included in the sample.

PROCEDURE: Routine monopolar and bipolar recordings were made from the major areas of the cortex over each hemisphere. The test also included a three-minute period of hyperventilation. An analysis of age trends was made by comparing two groups of 75 individuals each: those over age eighty (80-94 yrs.) with those under age eighty (65-79 yrs.). Further comparisons were made between these findings and results obtained by other investigators on normal young adult subjects.

RESULTS: When judged by young adult standards, a significantly higher percentage of abnormal electroencephalograms was found in the 80-94 year old group than in the group between age 65 and 79. Both of these older groups showed more abnormalities than reported by investigators working with young adults. The most striking age difference is the greater incidence of slow waves in the records of old people. The mean alpha frequency becomes significantly lower with age and there is an increase in delta wave activity. Preliminary findings suggest that cardiovascular disease is an important determinant of the age changes noted. The significance of these findings for the psychology of aging will be discussed.

2:15 P.M. Some early circulatory changes associated with aging. HARDIN B. JONES, *University of California, Berkeley.* (Sponsor, Harold B. Jones)

The exchange rate of simple substances in peripheral body tissues is depressed progressively throughout adult life. These changes associated with age have been observed in men by measurement of inert gas exchange, measurement of tolerance to decompression sickness, measurement of the respiration recovery rate from mild exercise, and measurement of distribution rate of radioactive sodium. It is believed that the rate of perfusion of blood through muscle tissues of the body has been depressed with age and is the common associated cause of these changes. In 18-year-old men the average perfusion of the resting musculature is estimated to be 25 ml of blood per liter of tissue per minute; this falls in the 25-year-old male to 15 ml/liter/minute and by 30 to 35 years the perfusion rate has dropped to 10 ml/liter/minute.

These changes may be of great individual variation and there is every reason to believe that the depression of blood flow continues to progress throughout the life of the average person. Marked individual differences are apparent. With some improvement in perfusion rate suggested by physical conditioning. It is possible that the reduction in the nourishing perfusion of blood through these carcass tissues induces some of the changes that are finally associated with aging. It is estimated that body tissues, in order to survive must have a minimum perfusion of 5 ml of blood per liter of tissue per minute. This will be approached by the average individual in his 60th to 70th year, but when the average perfusion rate is even highest, there are always some tissue areas at any time that are poorly perfused and as the average tissue blood perfusion rate decreases there is more and more likelihood that some parts of tissues are being critically deprived of nourishment.

It is quite possible that the depression of blood perfusion of the tissues has come about from a decreased metabolic requirement of aging tissues, rather than

that it has imposed, through a restriction of nourishment, a metabolic decline of tissues. In either of these events, the blood perfusion changes suggest their use as measures of "physiological age" and they are occurring from very early adult life over the age span associated with decline of physical vigor.

PRODUCTIVITY AND CAPACITY OF THE AGING

2:40-3:40 P.M., Friday, Presidential Parlors, Willard

(Co-sponsored with the Gerontological Society.)

ROBERT W. KLEEMEIER, Chairman

2:40 P.M. Aging in Air Force pilots as studied by the American Institute for Research. WALTER R. MILES, *Yale University*.

PROBLEM: To discover the effects of aging in relation to on-the-job performance and related attitudes of Air Force aircrew personnel.

SUBJECTS: 850 aircrewmembers were interviewed at bases in continental United States, and in Hawaii, Korea, and Japan.

PROCEDURE: The critical incident technique was used to collect reports from aircrew on effects of aging which they had observed in their own performance and the performance of others. A group interview technique was used, in which written responses were obtained. Subjects were requested to cite incidents in which effects of aging had a critical effect, either leading to notably poorer or better performance.

RESULTS AND CONCLUSIONS: The data, when analyzed and classified, indicate that impairment due to age occurs in the following five major areas.

1. Physical abilities necessary for effective performance are affected, in particular the ability to resist fatigue and excessive demands upon the organism.

2. Ability and motivation to improve in skill and technique tend to decline with age.

3. Actual job performance deteriorates particularly with respect to speed and accuracy of work and corrective action, retention of control in emergency situations, and retention of a proportionate degree of caution.

4. There is some indication that relationships with co-workers tend to become poorer.

5. Finally, motivation and adjustment with respect to the job are in general negatively affected by age.

2:55 P.M. Psychophysiological problems of aging in airline pilots. ROSS A. MCFARLAND, *Harvard University*.

PROBLEM: The purpose of the paper is to discuss the implications of aging on safety and efficiency and

probable length of service in airline pilots. Civil airmen represent a highly selected and homogeneous group with regard to fitness and ability and there is strong motivation to remain on active duty as long as possible. The primary question is to evaluate the age range within which certain psychophysiological reactions can no longer be compensated for by training, experience, and judgment.

POPULATION: In 1950 there were approximately 8,000 airline pilots. Tests were given to approximately 300 of these Ss between 21 and 60 years of age. The age distributions at various intervals over the past 10 years were analyzed to show the changes from year to year.

PROCEDURE: Several psychophysiological functions were selected for experimental analysis. In testing ability to hear, measurements were made with a standard audiometer. Vision at low illumination was determined with a Hecht visual discriminometer. Complex reaction times were studied with the Mashburn serial reaction time apparatus. Several additional tests were given relating to vision and intelligence. Ability to carry out duties in flight was judged in terms of flight checks and accidents. The data were then grouped by 5-year intervals and analyzed statistically. The final step was concerned with the analysis of changes in age in relation to design of equipment and medical standards.

RESULTS: The findings indicated that there were significant changes in these psychophysiological functions in relation to the age intervals indicated. No relationship was found, however, between age and accidents or between the findings on the tests and failure in flight checks. In general, it was concluded that the changes in the various functions studied were less than frequently supposed. At present it is not known what per cent of the total group will be able to perform their duties after 50 or 60 years of age. (Slides)

3:10 P.M. A theoretical analysis of the relations of problem length in simple addition to time required, probability of success, and age. JAMES E. BIRREN, WILLIAM R. ALLEN, and H. G. LANDAU, *National Institute of Mental Health and University of Chicago*.

PROBLEM: The purpose was to interpret age changes in accuracy and speed of simple addition by means of a theoretical model. Such an analysis presumably would be of value in attempts to analyze age changes in the intellect.

SUBJECTS AND MATERIALS: 413 Ss aged 16 to 90 years were given single column addition problems of varied lengths from 2 to 25 digits. Both the accuracy or probability of success, P , and the time per problem, T , were analyzed as functions of problem length.

MODEL: The time required to add several digits can be separated into three general components: (a) perception of the digits, (b) addition of each digit to the partial sum of digits previously added, and (c) writing of the answer. Assumptions about these classes of components permit derivation of a rational equation expressing time per problem as a function of the problem length; i.e., $T(n) = A + Bn + Cn^{1+k} + Dn^{2+k}$, where $T(n)$ is the total time for a problem of n addition operations.

Errors may be analyzed into four general components: (a) perception of the digits, (b) adding a digit to a partial sum, (c) carrying over a partial sum, and (d) recording the answer. Appropriate assumptions permit derivation of an expression for the probability of a correct answer to a problem of n operations in length; $P(n) = P_0 e^{-(C_1 n + C_2 n^3 + C_3 n^2)}$.

RESULTS: Empirical equations used in fitting the data appear consistent with the rational equations and the model thus appears plausible.

Elderly S s were slower for all lengths of problems and showed less accuracy than the young with increased problem length. Loss of speed is intimately involved in aging of the nervous system, thus elimination of time from psychometric indices would appear to neglect important psychological and psychophysiological data. Psychometric measurement in the elderly requires recording, independently, probability of success, and the time required for the various task components.

3:25 P.M. Wechsler-Bellevue age patterns for a prison population. **RAYMOND J. CORSINI** and **KATHERINE K. FASSETT**, *Wisconsin Department of Public Welfare*.

A number of investigators who have studied the patterns of intelligence of large samples of individuals in terms of age have concluded that intelligence declines after the age of thirty at a steady rate.

The hypothesis that we have taken is that the conclusions of these studies are wrong, and that the drop in scores of older people can be explained in a number of alternate ways including poor sampling, motivational differences, and the influence of physiological artifacts.

The subjects used were 1,072 incoming prisoners at San Quentin to all of whom the Wechsler-Bellevue (I) was given. The sample includes exactly 100 S s for each five-year period starting with age 15-19 to 55-59 and 172 people older than 59. This is the largest sample reported of older people on an individual intelligence test.

The weighted scores of these twelve samples of S s for each of ten subtests are averaged, and trends are obtained.

The results are unequivocal: all verbal tests hold

well, and some of them actually show a steady increase from early to late maturity: all timed and performance tests show a steady drop with age.

Conclusions are: (a) Intelligence does not decrease from early to late maturity; (b) Tests free of speed, vision and hearing hold well; (c) Verbal tests which included material that is accreted during life actually show improvement; (d) Tests which involve speed and vision and close attention drop rapidly; (e) For the purpose of interage comparisons of intelligence, only tests free of emotional, cultural, and physiological artifacts should be used.

CREATIVITY AND PERSONALITY CHANGES OF AGING

3:50-4:50 P.M., Friday, Presidential Parlors, Willard

(Co-sponsored with the Gerontological Society.)

ROBERT I. WATSON, Chairman

3:50 P.M. Man's most creative years: Summary and interpretation, **HARVEY C. LEHMAN**, *Ohio University*.

This paper comprises the final chapter of a forthcoming book which sets forth the ages (a) at which outstanding thinkers have most frequently made their momentous creative contributions, (b) at which leaders have most often attained important positions of leadership, and (c) at which high salaried workers in several areas have most commonly received large annual incomes. A few data for professional athletes are included to show their similarity to the other findings.

Sixteen possible factors which make for early creativity are listed as promising lines for further research. Five possible contributing factors that cause leadership to occur usually at elderly ages also are listed and discussed briefly.

Possibly every human behavior has its period of prime. No behavior can appear before the groundwork for it has been prepared, but in general it appears that the conditions essential for creativity and originality, which can be displayed in private achievement, come earlier than those social skills which contribute to leadership and eminence and which inevitably must wait, not upon the insight of the leader himself, but upon the insight of society about him.

4:05 P.M. Personality differences between normal young and middle-aged men: Item analysis of a psychosomatic inventory. **JOSEF BROŽEK** and **ANCEL KEYS**, *University of Minnesota*.

PROBLEM: Maturity, extending roughly from 20 to 60 years of age, is a period of slow but not insignificant changes in man's body composition and physiological

fitness, in special senses and psychomotor functions. What kinds of changes take place in the personality of clinically normal individuals?

SUBJECTS: The Ss were volunteers recruited from the University of Minnesota students and from local business and professional groups, who enrolled in a longitudinal study on the aging of the cardiovascular system. The present report refers to observations made in the second year of the study. The men in the younger age group averaged 21.9 years (range 18 to 26, $N = 119$), in the older group 50.3 years (range 46 to 56, $N = 200$).

PROCEDURE: The inventory, developed in this Laboratory in cooperation with Dr. Blocker Joslin for the study of predisease personality characteristics predictive of essential hypertension, was patterned after the Minnesota Multiphasic Personality Inventory. Only the definite (Yes or No) answers were considered for comparing the frequency of responses in the two age groups. The number of Uncertain (Can Not Say) answers was small (5 and 4 per cent in the case of items differentiating between the younger and older men at the one per cent level of significance).

RESULTS: The 68 (out of 216) items in which significant differences in the frequency of positive answers were obtained were grouped under seven headings: health, recreation and sports, home and family, self-confidence, emotional adjustment, interpersonal relations, and standards of conduct. The results, which will be presented in a form of tables, contribute to the characterization of aging in successful, healthy middle-aged men in a midwestern metropolitan community.

4:20 P.M. A comparison of Rorschach findings on aging subjects with their psychiatric and social ratings. CHARLES WENAR, *Institute for Psychosomatic and Psychiatric Research and Training of the Michael Reese Hospital*. (Sponsor, Sheldon J. Korchin)

PROBLEM: To evaluate the Rorschach findings on a group of aging individuals as a measure of the quality of their social adjustment in a group situation, and of their emotional well being as revealed by a psychiatric examination.

SUBJECTS: 20 individuals (12 female and 8 male), between the ages of 55 and 65. All were members of a class on the problems of aging, participating in an extensive study on the psychology of aging.

PROCEDURE: All Ss were independently ranked by a psychiatrist, psychologist, and sociologist according to the goodness of their adjustment. For the Rorschach rating: global ratings were made on each record, and the records were then ranked from general intactness of the personality structure to pathological disinte-

gration. For the psychiatric rating: each individual was interviewed and rated from general emotional health with intact defenses to pathological disturbance. For the social ratings: observation of the S's behavior in the class situation and in subsequent social situations was used as a basis for rating them from constructive, healthy interpersonal relations to antagonistic, unhealthy ones.

RESULTS: There was a high, positive correlation between Rorschach and psychiatric ratings ($\rho = .84$, $p < .01$), and a low, positive correlation between Rorschach and social adjustment ratings ($\rho = .40$, $p > .05$) and between psychiatric and social adjustment ratings ($\rho = .51$, $p < .05$).

CONCLUSIONS: The Rorschach can be used as a measure of the general intactness of the personality structure of aging individuals. However, it is of only limited usefulness in predicting the constructiveness of an individual's behavior in actual social situations. The reasons for this will be discussed in light of personality theory and defense mechanisms.

4:35 P.M. The adjustment of residents of a home for the aged. WAINWRIGHT D. BLAKE, *Bucknell University*.

OBJECTIVE: To collect material which may be useful in preparing individuals for aging and retirement.

SUBJECTS: 20 males ranging in age from seventy to ninety-three; 20 females ranging from sixty to eighty-five. The physical health of these subjects was above average considering their chronological ages.

PROCEDURE: Personal interviews were scheduled with each of the inmates over a period of seven months, each person being interviewed several times, by which an excellent state of rapport was established. Two interviewers were used, one male and one female, each for the purpose of interviewing the members of their own sex. The questioning of the interviewers covered five areas of the lives of the subjects; previous work, social life before becoming a resident of the home, religious attitudes during early life, recreation during life outside, general economic and family background. Information was also brought out as to the reasons for coming to the home. Much of the data procured was checked for general accuracy with the records of the home.

Each individual's contribution was analyzed for the purpose of discovering the attitudes or characteristics which might be an important feature of his adjustment. Also the group replies were examined to find the common features which might indicate those items important in adjustment.

RESULTS: As a result of the examination of all the data, the following common factors seem to be necessary to a happy old age adjustment to life:

1. Hard work over long hours of time.

2. Not over two or three social activities.
3. Life should be religion-oriented (organized religion).

From a study of the data several inferences, relative to a possible schedule of preparation for the coming of old age and retirement, may be drawn.

WORK AND RETIREMENT

9:00-10:00 A.M., Saturday, Presidential Parlors, Willard

(Co-sponsored with the Gerontological Society.)

ROSS A. MCFARLAND, Chairman

9:00 A.M. The efficiency of older workers in various types of jobs. MARK W. SMITH, *Ohio State University*. (Sponsor, Sidney L. Pressey)

The material reports a portion of an extended research program with regard to the potentialities of older persons for gainful employment. Study was made of about 5,000 male and female workers in a large industrial installation, ranging in age from under 20 to over 70. The attempt was to relate evaluations of these workers by their supervisors to age, within specific job categories. Results indicate that trends with age in efficiency do vary somewhat with the job under consideration. For instance, in work emphasizing job knowledge, judgment, skill and craftsmanship, rather than speed and physical endurance, the older worker compares favorably with the younger and middle-aged. Further, the specific characteristics in which the older workers excel or are excelled by their younger counterparts (e.g., general efficiency, attitude, congeniality, job knowledge, steadiness, etc.) depend much upon the type of job. Such findings presumably result from variations in selection procedures as well as from actual changes with age. In any event, they offer many clues as to ways in which industry and research can contribute both to better placement of older workers and to better adaptations of the job and the working environment to their potentialities.

9:15 A.M. The meaning of work and attitudes toward retirement of older workers in retail trade.

JANET BOWER, *University of Chicago*. (Sponsor, Robert J. Havighurst)

A study of the meaning of work and attitudes toward retirement of 160 department store workers between the ages of 55-70; half of group in sales work and half in sales-supporting occupations such as receiving-handling, inspecting-wrapping, and alterations work. Each subgroup was made up half of men and half of women. The study was conducted in a Chicago department store by means of hour-long, confidential interviews, for the most part tape-re-

corded. The study investigates the hypotheses that: (a) people in occupations requiring a low degree of skill will recognize and stress fewer values in work than will those in occupations requiring higher degrees of skill, (b) women will recognize fewer values in work than will men, and will not stress those values they do recognize to the same degree as will men, (c) persons, regardless of sex, who strongly emphasize the values they recognize in work will not wish to retire at the age of 65, and (d) more women than men will express a willingness to retire by the age of 65.

9:30 A.M. Pressure effect of aging on reported work performance. JACOB TUCKMAN and IRVING LORGE, *Teachers College, Columbia University*.

PROBLEM: The purpose of this study is to investigate the effect of aging on reported work performance.

SUBJECTS: A representative sample of retired union members in one division of a major industry in New York City: 240 industrial workers (216 men and 24 women), 65 to 85 years of age, retired on a union pension.

PROCEDURE: The retired workers were interviewed at the union offices or in their own homes to determine their attitudes toward retirement. The interview schedule included several questions involving a comparison of work performance just prior to retirement with work performance five years before retirement.

RESULTS: The findings indicate that these retired workers recognize that they do slow up physically as they grow older. Sixty-seven per cent of the respondents reported that prior to retirement they were not able to turn out as good a day's work as they had been able to do five years before; 83 per cent reported that they had to work harder to do so. Fifty-two per cent reported that they turned down overtime more than formerly. Fifty-one per cent were worried about not being able to keep up with younger workers. Eighty-four per cent stated that traveling to and from the job tired them more than before. As might be expected, the responses to these questions are statistically interrelated.

The attitudes of older workers toward their work performance may affect their relationship and socialization with younger workers within the plant. For the group studied, this is so. Thirty-seven per cent reported that younger workers tease and annoy older workers, and 60 per cent agreed that younger workers think older workers should retire and give them a chance to earn a living.

9:45 A.M. A corporation examines the problems of adjustment in old age. H. SAM ONODA and CURTIS B. GALLENBEEK, *Inland Steel Company*.

PROBLEM: An increasing number of employees are reaching the normal retirement age at Inland Steel. This fact, along with national population trends, has caused us to examine future problems which may face the corporation in regard to older workers and retired employees.

SUBJECTS: Older workers and retired employees.

PROCEDURE: For the past two years our Industrial Relations Research Department has been examining the over-all problems of adjustment in old age. Our study has been directed towards:

1. Obtaining facts about our older workers and retired employees.
2. Determining the problem areas of adjustment.
3. Determining if and what Inland can do about them.
4. Studying how to most effectively improve these problem areas.
5. Evaluating the results of any action undertaken.

Older workers and retired employees are being studied as individuals and as parts of three social groups: (a) National or society, (b) Local or community, and (c) Corporate or work.

With this as a basis, the following areas are being examined: (a) physiological, (b) economic, (c) sociological, and (d) psychological.

Many of our investigations have been in the nature of a joint research project with other companies, universities and private research organizations.

RESULTS: One of these studies has been a joint effort with the Later Maturity Laboratory of the University of Chicago. This study has been on the meaning of work. Data will be presented on the meaning of work and its relationship to various aspects of old age by age groups and by levels of occupations.

CONCLUSION: We believe that our broad frame of reference enables a more accurate evaluation of the problems of older workers and retirement.

SYMPOSIUM: CONCEPTS AND PROBLEMS IN THE STUDY OF WORK AND RETIREMENT

10:00-12:00 M., Saturday, Presidential Parlors,
Willard

(Co-sponsored with the Gerontological Society.)

ROBERT J. HAVIGHURST, Chairman

JOHN W. MCCONNELL, *Cornell University*. The economic and social problems of adjustment confronting the older worker today.

EUGENE A. FRIEDMANN, *University of Chicago*. The relationship of the meaning of work and attitude towards retirement.

ELI GINZBERG, *Columbia University*. The national implications of an aging labor force.

Panel Discussion

Discussants:

CURTIS GALLENGECK, *Inland Steel Company*.

L. S. BARRUS, *Cleveland Twist Drill Company*.

MILTON BARRON, *Cornell University*.

JACOB TUCKMAN, *Columbia University*.

PERSONALITY POTENTIAL OF THE AGING

1:30-2:30 P.M., Saturday, Presidential Parlors,
Willard

(Co-sponsored with the Gerontological Society.)

MORTON A. SEIDENFELD, Chairman

1:30 P.M. Psychoses and the physical rehabilitation of the aged. JOSEPH B. LAKRITZ and HERBERT FENSTERHEIM, *Goldwater Memorial Hospital, Welfare Island, New York; New York City Hospital, Welfare Island, New York; New York University*.

PROBLEM: In the rehabilitation of patients with physical handicaps, psychological factors play an important role. The problem becomes acute in the aged group because of the relative frequency of psychotic disorders. The purpose of this paper is to demonstrate, through a series of brief case studies, that certain aged psychotics are trainable in physical rehabilitation.

SUBJECTS: 7 patients, ranging in age from 63 to 80 years, are presented. These patients were selected from the Rehabilitation Wards of the Goldwater Memorial and New York City Hospitals of the New York City Department of Hospitals.

PROCEDURE: The psychotics are divided into three categories: Three patients with organic psychoses, two with postoperative psychoses, and two with chronic functional psychoses. Behavior and psychological test findings of each patient are described, along with some specific problems in treatment. Progress in psychical rehabilitation training is then evaluated.

RESULTS AND CONCLUSIONS: All the patients presented were psychotic; yet all benefited from rehabilitation training to at least the point where they were able to return to their homes and minimally care for themselves with some family supervision. It was noted that these patients were treated with very little disruption of rehabilitation ward routine. It is concluded that a psychosis in an aged patient is an obstacle, but not an insurmountable obstacle, in physical rehabilitation.

1:45 P.M. The effects of activities programs upon the socialization of residents of old age homes.

WILMA DONAHUE, WOODROW HUNTER, and DOROTHY COONS, *University of Michigan*.

PROBLEM: The principal objective of this study was to test the hypothesis that participation in activity programs designed to conserve and use personal resources will improve the adjustment of people living in homes for the aged.

PROCEDURE: A study was made of 14 old age institutions housing 835 residents from which an experimental and a control group of homes was selected by matching according to size of total resident population, types of individuals served, average age of residents, and existing activity programs.

A pre-activities assessment of the adjustment status of the residents was obtained in the two control and two experimental homes as measured by (a) a sociometric scale, (b) the Burgess, Cavan, Havighurst Attitudes Inventory, and (c) personal interview. The study population was selected to include only those residents in each home who were ambulatory and physically and mentally capable of participation.

The activities program period of eight months' duration followed the preliminary assessment immediately in the experimental homes. Nothing further was done in the control homes during this phase of the study except to make periodic visits to insure that significant changes in home circumstances were not taking place.

In the post-activities period another assessment of the study populations in both the control and experimental homes was carried out by administering the same measuring devices used in the initial assessment. **RESULTS:** Data will be presented indicating (a) increased sociability among the experimental home residents and (b) decreased group interaction among the control-home residents. Results of the Chicago Scale will also be reported.

2:00 P.M. Differences in the job satisfaction of urban teachers as related to age. GEORGE H. JOHNSON, *American Institute for Research*.

PROBLEM: To determine age differences in job satisfaction, and to evaluate characteristics of the job associated with age differences.

SUBJECTS: 1,086 teachers from urban communities of over 10,000 and under 100,000 population in central New York, ranging in age from 20-69.

PROCEDURE: Questionnaire data were analyzed concerning differences between decade-age groups (sex and marital status constant). Data included self-evaluations of job satisfaction, ratings of job characteristics as to their importance to satisfaction, responses to 123 questions concerning the job (from which a job satisfaction score was derived), and free-

response reasons for satisfaction and/or dissatisfaction.

RESULTS AND CONCLUSIONS: Job satisfaction increased significantly with age, the relationship being non-linear, with cycles of decreased satisfaction characteristic of certain age-sex-marital status groups.

Individual items which revealed significant increments in satisfaction with age related increased satisfaction to: (a) a "settling down" tendency (no wish for change, acceptance of the status quo and of job limitations, habituation to work), (b) increased interest in and liking for teaching and a greater dependence on it as a source of satisfaction, (c) better interpersonal relationships with employer and associates, and (d) feelings of greater competence and security.

Certain items revealed dissatisfaction among older females with respect to the work load as being excessively fatiguing and demanding, being discriminated against, and inadequacy of income, security, and future possibilities. Goal-striving behavior and expectancies of advancement and progress declined with age. Ratings indicated that all ages attached essentially equivalent importance to the various job characteristics rated, except for attributes concerned with security, status, "settling down," and physical exertion and fatigue. Greater importance was attached to those characteristics lacking or deficient in the actual job situation.

2:15 P.M. Case studies of well-adjusted persons over 70 years of age. JOHN P. McNULTY, *Ohio State University*. (Sponsor, Sidney L. Pressey)

This study attempted to assess by nondirective interviews, qualities of older persons selected by their peers as representing fine personality adjustment. The author interviewed each very informally (most several times) as to his feelings about retirement, present activities, interests and changes in these factors preceding and after retirement.

All were highly cooperative: in general they were above the general population in health for their age. Their feelings about retirement varied from relief to frustration. Activities varied from continuance of their former professional work to complete change. There were wide differences in economic security, which did not seem related to enjoyment of retirement. Most of them had decreased their social contacts drastically, and those that remain are with peers. Participation in religious ceremonies was noticeably missing. Health factors were rated highly as contributing to enjoyment of retirement. The social stereotype of the oldster seems to be grudgingly accepted primarily by those not in competition with others as to economic demands, while those actively engaged in vocational pursuits deny this role.

The method of approach used in this study appears to give data and insights much more rich and intimate than questionnaire studies. Great individual differences are found in this quite homogeneous group of old individuals. Personality changes per se do not appear; rather continuation of behavior patterns of long standing is the rule. Continuation in work past 80 was found. Subtle feelings of progressive loss of status, and after retirement of not belonging, were important in several cases. The series of informal interviews, usually at the person's home, seemed especially permissive for such feelings to appear. Sundry suggestions for preparation for retirement and for facilitation of adjustment afterward were obtained.

SYMPOSIUM: COMMUNITY MENTAL HEALTH FOR THE AGING

2:30-4:30 P.M., Saturday, Presidential Parlors, Willard

(Co-sponsored with the Gerontological Society.)

JERRY W. CARTER, JR., Chairman

PAUL N. STEVENSON, *National Institute of Mental Health*. Aging as a public mental health problem.

OLLIE A. RANDALL, *Community Service Society of New York*. The problem of programming for the aging.

SIDNEY L. PRESSEY, *Ohio State University*. The role of psychologists in mental health programs concerned with aging.

OSCAR J. KAPLAN, *San Diego State College*. Research needs in the field of the aging.

ANNUAL BANQUET

6:30 P.M., Saturday, Congressional Room, Willard

ANTON J. CARLSON, Chairman. Status and Prospects of Research on Aging.

ROBERT A. MOORE. Biological aspects.

HAROLD E. JONES. Psychological aspects.

ERNEST BURGESS. Sociological aspects.

PSYCHOMETRIC SOCIETY *

FACTORIAL STUDIES I

1:40-2:40 P.M., Wednesday, Pan-American Room, Statler

(Co-sponsored with Division 5. See Division 5's program.)

FACTORIAL STUDIES II

2:50-3:50 P.M., Wednesday, Pan-American Room, Statler

(Co-sponsored with Division 5. See Division 5's program.)

SYMPOSIUM: MEASUREMENT OF SPATIAL ABILITIES

9:50-11:50 A.M., Thursday, Pan-American Room, Statler

(Co-sponsored with Division 5.)

BENJAMIN FRUCHTER, Chairman

Participants: LLOYD G. HUMPHREYS, WILLIAM B. MICHAEL, and WAYNE S. ZIMMERMAN.

*In accordance with the action of the Board of Directors, the program of the Psychometric Society was cleared with an appropriate division of the APA, in this case the Division on Evaluation and Measurement.

BUSINESS MEETING: PSYCHOMETRIC CORPORATION

10:00-12:00 M., Thursday, Room 237/8, Mayflower

HERBERT S. CONRAD, President

INVITED ADDRESS: PSYCHOMETRIC SOCIETY SPECIAL PROGRAM

2:50-5:50 P.M., Thursday, Congressional Room, Statler

WALTER V. BINGHAM, Chairman

L. L. THURSTONE. The Development of Objective Measures of Temperament.

SYMPOSIUM: VARIABILITY VS. QUANTITATIVE RESPONSES FOR DETERMINING PSYCHOPHYSICAL UNITS

9:50-11:50 A.M., Friday, North Room, Mayflower

HAROLD GULLIKSEN, Chairman

Speakers: JOHN VOLKMAN and WARREN S. TORGERSON.

Discussants: WILLIS C. SCHAEFER and WENDELL R. GARNER.

SYMPOSIUM: EXPERIMENTAL DESIGNS IN EVALUATION OF CRITERIA

1:40-3:40 P.M., Friday, North Room, Mayflower

ERWIN K. TAYLOR, Chairman

Participants: MARION RICHARDSON, LEONARD W. FERGUSON, RICHARD GAYLORD, ROBERT J. WHERRY, JOHN C. FLANAGAN, and M. DEAN HAVRON.

SCALING TECHNIQUES

4:00-5:00 P.M., Friday, North Room, Mayflower

HERBERT S. CONRAD, Chairman

4:00 P.M. A level of proficiency scale for a unidimensional skill. LEDYARD R. TUCKER, *Educational Testing Service*.

A system of scaling to be presented is an attempt to provide scores on a skill for individuals relating their proficiency to the difficulty of the task which they perform at a given marginal degree of success. A simple example is that of receiving telegraphic code signals. An individual will make fewer errors receiving slow signals than fast signals. At some speed he would receive with 90% accuracy. This signal speed could be used to characterize the individual's level of proficiency. A number of intellectual skills do not present an externally defined scale of difficulty. The proposed system is being devised for these intellectual skills.

The following postulates are utilized in constructing the mathematical model.

1. A skill exists on which there are individual differences.

2. A number of tasks of varying difficulty involving use of the skill can be constructed, performance on each task being describable as successful or not successful.

3. For any group of individuals possessing a given amount of skill, the successes of performances of the tasks are uncorrelated.

4. A scale of scores for the skill exists such that the probability of success for each task as related to the scale for the skill may be represented by a psychometric curve (normal curve ogive).

In order to determine the applicability of this model the following steps are involved:

1. Establishing subgroups of individuals with approximately equal skill,

2. Obtaining proportion of successes on each task for each subgroup,

3. Determining a scale value for each subgroup and two parameters of the psychometric curve for

each item by means of an iterative least square solution.

Results for an initial application to a set of verbal analogy items indicate promising possibilities. A further tryout (now in progress) involves scaling of vocabulary items given to students from fourth grade through college.

4:15 P.M. A least squares solution for successive intervals. HAROLD GULLIKSEN, *Educational Testing Service and Princeton University*.

The method of successive intervals is one of the more useful of the psychological scaling methods. The published solutions have been graphic approximations. It is the purpose of this paper to present a least squares solution, against which more rapid approximate solutions might be evaluated.

Minimizing the error (Q) gives a least squares solution.

$$(1) \quad Q = \frac{1}{b^2} \sum_{i=1}^n \sum_{g=1}^k (m_i + s_i z_{ig} - t_g)^2,$$

where the unknowns are

t_g ($g = 1 \dots k$), the scale value for the dividing points between the $k + 1$ piles,

m_i and s_i ($i = 1 \dots n$), the mean and standard deviation of the scale values for stimulus i .

The observations are obtained from sorting the n stimuli N different times into $(k + 1)$ piles. Each experimental proportion is converted to a base line value (z_{ig}) in terms of some assumed probability distribution such as the normal curve.

Setting the partial derivative of (1) with respect to m_i , s_i , and t_g equal to zero gives the solution for s_i from the characteristic equation

$$(2) \quad X[R - \theta I] = 0,$$

R is the matrix of r_{ij} (the correlations between z_{ig} and z_{jg}),

X is the row vector $(s_1 \bar{z}_1 \dots s_n \bar{z}_n)$.

We then find m_i from

$$(3) \quad m_i = a - s_i \bar{z}_i$$

and the t_g from

$$(4) \quad \theta(t_g - a) = \sum_{i=1}^n s_i(z_{ig} - \bar{z}_i).$$

a and b are arbitrary constants.

\bar{z}_i and \bar{z}_i are the mean and standard deviation of the z_{ig} .

An illustrative problem comparing the least squares and other methods will be presented. (Slides)

4:30 P.M. Multidimensional scaling: Empirical tests of the method of triads. WARREN S. TORGERSON, *Social Science Research Council, Princeton University.*

PROBLEM: To evaluate empirically the multidimensional scaling method of triads through the investigation of areas of known dimensionality and through comparison, in a one-dimensional case, of the method with the method of paired comparisons.

SUBJECTS: 40 male student volunteers from the sophomore, junior, and senior classes at Princeton High School.

PROCEDURE: In the one-dimensional case, nine gray stimuli, differing from each other only in brightness, were presented to the subjects by both the method of triads and the method of paired comparisons. The presentation was repeated at a later date in order to obtain estimates of the consistency of the methods. In the two-dimensional case, nine Munsell colors, all of the same red hue but differing in value and chroma, were presented by the method of triads. The paired comparison data were analyzed by Case V of the law of comparative judgment. The triads data were analyzed using a least squares procedure to obtain comparative distances, and using an extension of Young and Householder's procedures to determine dimensionality and to obtain final scale values.

RESULTS: The multidimensional method yielded substantially unidimensional scales of the gray stimuli. The triads scale was found to be more consistent than paired comparisons, but less efficient in reproducing the original proportions. The triads and paired comparisons scales agreed with one another about as well as their respective reliabilities would permit.

The multidimensional analysis resulted in a two-dimensional configuration of the colored stimuli. After rotation of axes, the structure was found to correspond closely to the original Munsell system.

CONCLUSION: The method of triads with multidimensional analysis would seem to constitute a practical, workable method for scaling certain types of multidimensional stimuli.

4:45 P.M. A method for multidimensional item scaling. JOSEPH BENNETT, *University of Michigan.*

PROBLEM: To develop a method of multidimensional item scaling without the use of metric assumptions, substantially parallel to the unidimensional "Guttman Scale."

RESULTS: A multidimensional model has been developed which resolves a partial ordering of response patterns to dichotomously scored items, into a set of simple orders. The basic assumption is that to pass any item, the subject must be above the critical item level on all of the simple orders or "dimensions."

From this premise, five theorems are proved which permit the actual reconstruction of the dimensions. It is shown that in the unidimensional case, the method reduces to equivalence with "Guttman Scaling." (Slides)

BUSINESS MEETING

5:00 P.M., Friday, North Room, Mayflower

JOHN C. FLANAGAN, President

DINNER AND PRESIDENTIAL ADDRESS

6:00 P.M., Friday, Pan-American Room, Mayflower

JOHN C. FLANAGAN. Methodology in Psychology

STATISTICAL METHODS I

9:50-10:50 A.M., Saturday, North Room, Mayflower

NEIL J. VAN STEENBERG, Chairman

9:50 A.M. A rational learning equation based on the anticipation method. WILLIAM B. SCHRADER, *Educational Testing Service.*

PROBLEM: To derive and apply a rational learning equation using the anticipation method as a model. DEVELOPMENT: Assume that the tendency to make a correct response is increased by performing a correct response and by performing an incorrect response, but that the rate of increase is k for the former and k' for the latter. Assume that the tendency to make an incorrect response is decreased by performing an incorrect response, designating this rate as g . These assumptions may be stated in the following parametric differential equations:

$$\frac{dc}{dt} = kp + k'(1 - p),$$

and

$$\frac{dw}{dt} = -g(1 - p).$$

These equations yield the following solution:

$$g \left(\frac{p}{1-p} \right) - (k - k') = \left[\left(1 + \frac{k}{g} \right) \left(\frac{p}{1-p} \right) + \frac{k'}{g} \right]^{g/(g+k)} = Gt + H.$$

In this equation, p may be defined as the proportion of correct responses and t as trials. Certain resemblances of this approach to that of Thurstone (1930) and Gulliksen (1934) may be noted.

APPLICATION: An empirical application of the foregoing equation was made to 33 average learning curves, using data made available by the late Professor John A. McGeoch. It was found that variation of the k' (instruction) parameter was useful in fitting

curves for words in various serial positions in the lists. All but four of the 33 curves were judged to be acceptably described by the equation. Results will be presented graphically.

10:05 A.M. A comparison of point-biserial correlation coefficients calculated from original item data and the same values estimated from Flanagan r biserial correlation coefficients. LYMAN C. HUNT, JR., *Pennsylvania State College*.

PROBLEM: Are item discriminatory indices (point biserial correlation coefficients) derived from Flanagan's short method of estimating the product-moment coefficients comparable to the same values computed directly from basic item data?

SUBJECTS: 55 items were compared. The items represent a selected sample from a test battery containing 224 items. The test battery contained groups of items designed to measure six skills of reading comprehension. All 25 items in one skill group and 30 of 44 items in a second skill group were studied. Three hundred and seventy college students responded to each item. Five choice multiple-choice items had been reassembled from the existing forms of Co-operative Reading Comprehension Tests. Each item was scored on a pass-fail (1-0) basis.

PROCEDURE: Total scores made on the skill measure in question were used as criterion measures. Because 370 students were used, the 100 high and the 100 low scores represented the top and bottom 27 per cent of the total group. The number of individuals who passed each item was counted and provided the values necessary to obtain discriminatory indices (biserial correlation coefficients). The values were read from the Flanagan Table. Each biserial r value was converted to its equivalent point-biserial r value.

The point-biserial r value was actually computed for the 55 items from the original data to determine if bias had been introduced in the use of Flanagan's method.

The frequency, the mean, and the significance of the differences (t ratios) were computed for the two point-biserial values.

RESULTS: The results indicate the point-biserial r values determined by converting them from estimates of biserial r values are for practical purposes the same as computing point-biserial r values directly from original item data.

10:20 A.M. The sampling distribution of the mean score of a group who "pass" an item. MELVIN R. MARKS, *Personnel Research Section, AGO, Department of the Army*.

The biserial coefficient of correlation (r -bis) is an index of relationship between two variables where

one (y) is continuous (scores), and the other (x) is assumed continuous but qualitatively categorized in a dichotomy (e.g., "pass" and "fail"), and both x and y are assumed to be normally distributed in their respective universes. The formula for r -bis involves the y -score mean of the "passing" group, here denoted in standard score form as \bar{z}_p . This paper derives the standard error of this statistic ($\sigma_{\bar{z}_p}$) proceeding from the assumptions that: (a) From a *universe* (all persons who might attempt an item) a *population* of N scores of persons actually attempting an item is randomly drawn; (b) the n scores which are "passing" scores are a proportion p of the N population scores so that $n = pN$, and p is an unbiased estimate of the proportion who would pass in the *universe*; (c) samples of fixed size n are repeatedly drawn from the N cases in the population; (d) the y -scores of the "passers" are normally distributed in the *universe*. Under these assumptions,

$$\sigma_{\bar{z}_p} = \sqrt{\frac{q}{p(N-1)}}$$

It is demonstrated that

$$C.R._{\bar{z}_p} = C.R._{(\bar{z}_p - \bar{z}_q)} = C.R._{r.bis}$$

and hence, $\sigma_{r.bis}$ may be derived by routine algebra from $\sigma_{\bar{z}_p}$ when the hypothesis to be tested is that parameter values of \bar{z}_p , $r.bis$ are zero. The derivation of $\sigma_{r.bis}$ has fewer restrictive assumptions and approximations than those employed by Soper in his 1915 *Biometrika* derivation.

Since the derivation of $\sigma_{\bar{z}_p}$ assumes constant N and p , $C.R._{\bar{z}_p}$ as a function of N and p is investigated and the effect of fluctuation in p is found to be relatively small.

The principal usefulness of $\sigma_{\bar{z}_p}$ is that, with it items may be ordered in terms of the magnitude of the critical ratio based upon the r -bis, without actually computing r -bis. Hence item selection computation is reduced and simplified. A nomograph is provided which, when entered with \bar{z}_p , N and p , will indicate whether or not the r -bis appropriate to the item is significantly different from zero at a stated level of confidence. The statistic \bar{z}_p has the further virtue that its magnitude, being a relatively unfamiliar figure, does not unduly influence item selection as r -bis occasionally does. It is safe also to use \bar{z}_p with extreme values of p .

10:35 A.M. A simplified procedure for multiple discriminant analysis. DAVID R. SAUNDERS, *Educational Testing Service*.

PROBLEM: The effectiveness of multiple discriminant analysis for the separation of groups and the assignment of individuals to groups has been limited in practical cases involving more than a few groups

and/or more than a few variables by the computational burden imposed, despite recent advances.

PROCEDURE: A computational plan has been developed which involves essentially the following steps: (1) The use of dummy variables to represent known group membership. (2) Computation of a single overall correlation matrix, including the dummy variables along with the measured variables. (3) Factor analysis of this matrix, using the "diagonal method" and the dummy variables as pivots. (4) Optional rotations and significance tests. (5) Factor estimation by ordinary regression techniques, to any desired degree of approximation; these regressions are the discriminant functions. (6) Estimation of distance-squared of each individual from the centroid of each group, in a standard metric; an individual of unknown affiliation may be assigned to the group whose centroid is closest.

DISCUSSION: When taken as a set, the discriminant functions provided by this procedure are equivalent to those provided by Bryan's Method, and are obtained with a relatively small amount of effort. Opportunities for further approximation-economies have been incorporated. The final results are presented in a standard metric, which is readily interpreted.

A worked example using hypothetical data for four groups (including one dependent group) and six variables (including one suppressor variable) will be presented.

STATISTICAL METHODS II

11:00-12:00 M., Saturday, North Room, Mayflower

JOHN T. DAILEY, Chairman

11:00 A.M. The application of formal systems to psychological data. F. J. MCGUIGAN, *Human Resources Research Office, Department of the Army*. (Sponsors, Willis C. Schaefer and W. G. Mollenkopf)

The first step in applying the hypothetico-deductive method in psychology is the choice of a formal model appropriate to its data. By presenting and evaluating the possible formal systems, those which appear most favorable can be delimited and in turn receive the major part of our system-construction efforts.

The formal systems of logic and mathematics offer encouragement where the use of natural language in psychology has proven unsatisfactory. Thus the logical calculi of propositions, classes, and functions demand unambiguous statement of propositions, allow rigorous deduction of consequences of qualitatively stated theories, etc. They, however, suffer various disadvantages, e.g., a single false empirical instance negates

a logical proposition. In addition where behavior is a function of several factors and can be predicted only by specifying the value of each, these calculi are not appropriate. The calculus of probability has all of the advantages of these more elementary calculi, plus allowing probability values to be specified for each proposition. It thus allows evaluation of a proposition in terms of positive and negative instances of empirical tests, and is probably the most useful for psychologists.

The application of classical mathematical systems to psychological data is to be evaluated in terms of the generality of specific mathematical functions, and their empirical constants. The major advantage of this approach is that propositions stated in the form of mathematical equations provide numerous deductions, since their terms are numerically quantified.

There is, however, no a priori reason to think that classical mathematical systems are appropriate to psychological data. It is quite possible that a unique geometry will have to be constructed or discovered. Attempts have been made to apply topological and vector geometries, but since they are still in an exploratory stage their evaluation must be delayed pending more extensive investigation. (Slides)

11:15 A.M. Survey of item analysis methods. JAMES A. SPRUNGER and V. M. TYE, *Personnel Research Section, AGO, Department of the Army*. (Sponsors, Willis C. Schaefer and W. G. Mollenkopf)

PROBLEM: For the past 25 years, many item analysis methods have been proposed and used in personnel research. An attempt has been made by the authors to evaluate the various methods from the viewpoint of adherence to adequate item analysis theory and also from the standpoint of computational efficiency.

PROCEDURE: The following sources were reviewed thoroughly preparatory to the compilation of a bibliography:

1. All issues of the *Psychological Abstracts*.
2. Bibliographies in statistical and psychometric volumes.
3. Bibliographies in APA journals.
4. Bibliographies compiled by government agencies.

RESULTS: I. Major methods.

- a. Critical ratio, and methods involving differences in mean, proportion, or percentage passing the item.
- b. Correlation—biserial, point biserial, tetrachoric, of test item with internal and/or external criterion. Items are selected on the basis of correlation with the criterion.

- c. Methods involving interrelationships of items.
 1. Intercorrelations among items usually accompanied by some item selection method to obtain the

highest multiple between the criterion and a composite of the smallest number of selected items.

2. Factor analysis—used to determine number of factors involved in an interitem correlation matrix, and thereby “balance” or control the actual content of the test.

II. Theoretical and empirical evaluation of methods.

Comparisons of item analysis techniques have demonstrated surprisingly small empirical differences among the methods, in spite of the fact that, on theoretical grounds, methods involving item interrelationships should prove consistently superior.

11:30 A.M. The development and uses of three *abac*'s for the estimation of a tetrachoric coefficient of correlation from a phi coefficient. WILLIAM B. MICHAEL, NORMAN C. PERRY, and ALFRED F. HERTZKA, *The RAND Corporation, San Jose State College, and University of Southern California.*

Knowing the size of a phi coefficient ϕ_p and the level of item difficulty p for a total criterion sample, one may estimate the magnitude of the tetrachoric coefficient of correlation r_t in item-analysis studies from use of one of two *abac*'s depending upon whether the proportion of individuals p' in each of the two extreme groups of a total criterion sample is .50 or .27 (approximately). In addition, when the proportion of individuals in each of the extreme groups is .27, when the size of ϕ_p is available, and when the level of item difficulty \bar{p}_s represents the proportion of individuals in the two extreme groups combined that react in the same manner, the magnitude of r_t may be estimated from use of a third *abac*.

It is assumed that the variables representing criterion, or total, scores and response behavior to an item are continuous and normally distributed and that the regression of the former variable upon the latter is linear. Such an assumption permits the use of a set of tables “Volumes of Normal Bivariate Surface” developed by Karl Pearson in the calculation of the theoretical, or true, values of a phi coefficient associated with appropriate values in r_t and p (or \bar{p}_s) the corresponding loci of which are represented by families of curves in the *abac*'s.

A means is described for use of two of the three *abac*'s in conjunction with one devised by Guilford for the estimation of a phi coefficient when there is an even division of cases in the two categories of a

criterion variable. Estimates of r_t furnished by the *abac*'s are ordinarily accurate to at least two digits to the right of the decimal point.

The contents of this paper constitute an independent project outside the scope of the research activities at The RAND Corporation.

11:45 A.M. The predicted and observed effect of chance on multiple-choice test validity. LYNNETTE B. PLUMLEE, *Educational Testing Service.*

PROBLEM: Uncertainty regarding the effect of chance success on test scores when answer options are supplied for test questions has been an important factor in restricting the use of the multiple-choice answer form. It is important, therefore, to know to what extent the presentation of answer options results in lower reliability and validity.

SUBJECTS: Two groups of 282 and four of 138 college level students.

PROCEDURE: For the case in which chance is fully operative, it is possible to derive formulas expressing the expected multiple-choice statistics in terms of answer-only (free response) statistics. This has been done previously for test reliability by Carroll. The formula for expected multiple-choice test validity, which has been derived for the present paper, indicates that item difficulty, number of options, test length, and variability are factors. These formulas assume a nonspeeded test with every examinee answering correctly all items which he knows and answering at random in multiple-choice form those items which he does not know.

To examine the extent to which expected effects of chance are borne out in an actual test situation, a set of mathematics items was prepared both with five options and without options. Observed multiple-choice and answer-only validity values, where rank in class is the criterion, will be presented together with the validity value predicted for multiple-choice from answer-only statistics and with validity values obtained when $R-1/4W$ scoring is used.

RESULTS: The relative reliabilities of observed multiple-choice and answer-only scores on the described tests have been compared previously, with the finding that there were no significant differences. Preliminary findings with respect to test validity indicate a similar lack of significant differences. The bearing of these findings on test construction will be discussed.

OTHER GROUPS

SOCIETY FOR PROJECTIVE TECHNIQUES

Executive Committee Meeting

4:00 P.M., Thursday, Room 260, Mayflower

Research Papers

8:50-10:50 A.M., Friday, Congressional Room, Statler

MARGUERITE R. HERTZ and LEAH LOEHRKE. The application of the Piotrowski and Hughes signs of organic defect to a group of patients suffering from posttraumatic encephalopathy.

ELIZABETH Z. JOHNSON. The use of the Rorschach Prognostic Scale with Raven's Progressive Matrices to predict play therapy progress among retarded children.

ROY SCHAFER. Rorschach imagery in aging patients.

EMANUEL K. SCHWARTZ. Personality correlates of paraplegia indicated in the Rorschach situation.

ISIDOR W. SCHERER. Validation of projective data and derivation of hypotheses from a longitudinal analysis of the test results of a leukotomized patient.

FLORENCE R. MIALE and J. Q. HOLSOPPLE. Sentence completion as a projective method.

BARBARA BOWEN. An extension of the Mosaic Test designed to increase its prognostic value.

HARRY M. GRAYSON. The Grayson-Brentwood Rorschach Series: I. Rorschach productivity and card preference as influenced by experimental variation in color and shading.

Symposium: Content Analysis of the Rorschach

11:00-1:00 P.M., Friday, Congressional Room, Statler

FRED BROWN, Chairman

Participants: ROY SCHAFER, FREDERICK WYATT, ROBERT M. LINDNER, and AUDREY S. SCHUMACHER.

Symposium: Diagnostic Case Symposium—"The Case of Jay"

1:40-3:40 P.M., Friday, Ballroom, Mayflower

(Co-sponsored with Division 12. See Division 12's program.)

Business Meeting

5:00-6:30 P.M., Friday, South American Room, Statler

Dinner and Presidential Address

7:00 P.M., Friday, Pan-American Room, Statler

EDWARD M. L. BURCHARD. The Use of Projective Techniques in the Analysis of Creativity.

MEETING OF CHIEF PSYCHOLOGISTS IN STATE MENTAL HEALTH PROGRAMS WITH PSYCHOLOGISTS OF THE NATIONAL INSTITUTE OF MENTAL HEALTH

9:30 A.M., Saturday (August 30) and 9:00 A.M., Sunday, Stone House, National Institute of Mental Health, Bethesda

VETERANS ADMINISTRATION CLINICAL PSYCHOLOGY MEETINGS

Training Conference

Sunday, Congressional Room, Statler

1:00 P.M. VA staff.

3:00 P.M. University faculty and consultants.

5:00 P.M. Social hour.

Invited Address

4:00 P.M., Tuesday, Ballroom, Mayflower

JOEL T. BOONE, Vice Admiral (M.C.), U. S. Navy, Ret., Chief Medical Director, Veterans Administration. Psychology in the Veterans Administration Medical Program.

INTERNATIONAL COUNCIL OF WOMEN PSYCHOLOGISTS

Meeting of Board of Directors and Committee Chairmen

1:00 P.M., Sunday, Capitol Room, Statler

Business Meeting

4:00-6:00 P.M., Monday, Room 260, Mayflower

Luncheon

12:30 P.M., Tuesday, Bonat Cafe

Open Meeting: Psychological Values Underlying World Adjustment

8:00 P.M., Wednesday, East Room, Mayflower

CHARLOTTE BUHLER, Chairman

ROBERT J. HAVIGHURST. Personal freedom: Its meaning for international understanding.

JAMES GILLESPIE. Aspirations and outlook of the youth of ten nations: A research study.

METHODS AND PROBLEMS OF INTER-DISCIPLINARY RESEARCH IN MENTAL HEALTH

4:00-6:00 P.M., Monday, East Room, Mayflower

HUBERT S. COFFEY, Chairman

Participants: JOHN A. GLAUSEN, JEROME D. FRANK, MARGARET BARON LUSZKI, (other participants to be announced).

Report and discussion of an interdisciplinary work conference in mental health research, August 29-31. This is one of a series of five work conferences sponsored by the National Institute of Mental Health, under the direction of the National Training Laboratory in Group Development, which are being held in conjunction with the annual meetings of the professional societies. The conferences grew out of the need expressed by workers in the field for an exchange of thinking regarding some of the concrete problems of theory, methods, and research design, and of actual relationships of members of different disciplines working together on research teams.

PSI CHI

Council Meeting

9:00-11:00 A.M., Thursday, Cabinet Room, Mayflower

Luncheon, Business Meeting, and Session of Papers

Friday, Y. W. C. A., 17th and K Sts.

12:30 P.M. Annual Luncheon.

1:30 P.M. Business Meeting and Chapter Reports.

3:00 P.M. Session of Research Papers.

PSYCHOLOGICAL CORPORATION MARKET RESEARCH GROUP

9:00-5:00 P.M., Sunday, Federal Room, Statler

COMMITTEE ON THE PREPARATION OF EDUCATIONAL PSYCHOLOGISTS

8:40-11:30 A.M., Monday, Room 237/8, Mayflower

DINNER: THE SIR CHARLES BELL SOCIETY

6:00 P.M., Monday, Council Room, Statler

OPEN HOUSE: PERSONNEL RESEARCH SECTION, AGO

1:40-4:40 P.M., Tuesday, Wake Building, Oklahoma and E St., N. E.

SPECIAL INTEREST GROUP DISCUSSION: PSYCHOLOGY OF THE PHYSICALLY IMPAIRED

(Sponsored by the Office of Vocational Rehabilitation, Federal Security Agency.)

9:50-11:50 A.M., Wednesday, Jefferson Room, Mayflower

PHYLLIS BARTELME, Chairman

AMERICAN BOARD OF EXAMINERS IN PROFESSIONAL PSYCHOLOGY

ABEPP Examinations: Panel for Oral Examiners

1:40-3:40 P.M., Wednesday, Cabinet Room, Mayflower

OHIO STATE UNIVERSITY ALUMNI. INFORMAL MEETING

4:00-5:00 P.M., Tuesday, Room 260, Mayflower

DINNER: PURDUE UNIVERSITY STU- DENTS, FACULTY, AND ALUMNI

6:00 P.M., Wednesday, Golden Parrot Restaurant

LUNCHEON: PENNSYLVANIA STATE COLLEGE ALUMNI

12:15 P.M., Wednesday

(Make reservations at the APA Information Desk before 1:00 P.M., Tuesday.)

SOCIAL HOUR: NAVAL AVIATION PSYCHOLOGISTS

5:00 P.M., Wednesday, Commissioned Officers Mess, Naval Medical Center, Bethesda, Maryland

LUNCHEON HONORING JOHN F. DASHIELL

12:15 P.M., Thursday, Cabinet Room, Mayflower

REUNION: PERSONNEL RESEARCH SECTION, AGO

5:00-7:00 P.M., Thursday, Federal Room, Statler

COMMITTEE OF PSYCHOLOGISTS IN PRIVATE PRACTICE

9:50-11:50 A.M., Friday, Pan-American Room, Mayflower

LUNCHEON: COLUMBIA UNIVERSITY ALUMNI

12:15 P.M., Friday, Room 260, Mayflower

GROUP FOR RESEARCH ON WAR AND PEACE

8:00 P.M., Friday, North Room, Mayflower

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THE AMERICAN PSYCHOLOGIST

The Professional Journal of the American Psychological Association, Inc.

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Subscription: \$5.50 (Foreign \$6.00). Single copies, \$1.00.

DISCUSSION ON ETHICS

Because the APA's time of decision about ethical standards is very near, part of this issue of the *American Psychologist* is devoted to a discussion of the proposed code of ethics.

Since 1949, the APA Committee on Ethical Standards for Psychology¹ has worked assiduously, responsibly, and democratically to draw up an ethical code based on psychologists' best wisdom concerning ways we should conduct ourselves in our professional affairs. This arduous and high-minded labor has resulted in a code now in such form as to warrant official and decisive consideration by the Association. (The various sections of the code have been published in the *American Psychologist*, 1950, 5, 620-626; 1951, 6, 57-64, 145-166, 428-435, 436-443, 443-452, 626-661.) Sometime during its meetings in Washington on September 2 and 4, the APA Council of Representatives will be confronted with the necessity of taking action on the proposed code.

The Council's action with respect to ethical standards will have a significant effect on American psychology. Psychologists have for the last decade or more struggled with the problem of keeping our burgeoning growth healthy and responsible. We have undertaken the relatively unique and very difficult job of maintaining a creative partnership involving the pure and the applied psychologists. We have been often confused and emotional, often moved to vigorous arguments among ourselves. The historian of a century hence may well record not only confusion, conflict, and human irrationality in our actions during the 1940-1970 span, but he may also find bursts of intelligent self-consciousness, some instances of real social inventiveness and situations in which the advancement of scientific and social values was achieved by genuine valor.

As a part of its attempt to guide itself toward maturity, American psychology is now attempting to formulate and articulate its conscience, and to establish some manner of control over those who violate it. The very attempt to state ethical standards has already had effects on psychology. The final action with respect to an official code of ethics will have real consequences for the growth of all branches and aspects of psychology. It is unlikely that anyone can now describe in detail what will happen if we do or do not adopt a codification of our conscience, but it is easy to formulate questions about possible consequences. Will the

adoption of a code give us inflexible standards in a world permanently changing? Will a code result in our leaning so heavily on institutional control that we stifle individuality and establish a cheap surrogate for individual conscience? Is officially codified morality a move toward undesirable and undemocratic centralization of authority and depersonalization of life? Will the failure to adopt a code represent a failure to help society gain the sort of professional help it needs? Will the refusal to adopt a code of our own making lead to attempts on the part of people outside of psychology to control our behavior? Would that be undesirable? Will the failure to adopt a code cripple our attempts to deal with psychologists who do "bad" things and thereby harm people both inside and outside the profession? Do we really need to do something official about psychologists who behave badly? If so, how do we do it if there are no articulated standards of conduct? If there is no code, will we be able in our handling of ethical problems to temper our natural empathy with the sinner with a mature identification with society?

It is possible to argue that we must honestly confront such questions before we can know what we are doing with respect to ethical standards. It is also possible to argue that many psychologists, properly impressed with the creative job done by the Committee on Ethical Standards and possessing a generally positive attitude to the good term "professional ethics," have devoted more thought to the details of a code than to its over-all effect on psychology. It is a fair assumption that psychologists will feel better about what they do—or do not do—concerning ethics if they face these questions first; if, before they act, they intelligently confront every reasonable argument rationally presented.

This issue of the *American Psychologist* represents an attempt to present to all members of the Association the opinions of some of those who have thought about ethical standards and have been motivated—or persuaded—to commit their thoughts to paper. Early in the year we started to solicit papers on ethics from members known to have worked out certain thoughtful and distinctive points of view. In a number of cases the individuals from whom papers were solicited were suggested by Nicholas Hobbs. They were people from whom Dr. Hobbs had received provocative letters, some supporting, some opposing the work of the Committee.

We did not receive papers from everyone we asked to submit comments. Those that were received are pre-

¹ Members of the Committee are Stuart W. Cook, Harold A. Edgerton, Leonard W. Ferguson, Morris Krugman, Helen D. Sargent, Donald E. Super, Lloyd N. Yepsen, and Nicholas Hobbs, Chairman.

sented in the following pages. In this group also, there is an article by Everett Hughes, professor of sociology at the University of Chicago, presenting a discussion of "occupational models," a discussion not bearing explicitly on the problem of ethical standards but one that will furnish useful background for psychologists' thinking about this aspect of professional development. In addition to solicited comment the present issue contains a selection of excerpts from letters written by various psychologists to the Chairman of the Committee on Ethical Standards. Dr. Hobbs sent us his file of correspondence and we here selected a number of excerpts judged to present a variety of views. The excerpts are printed with the permission of their authors.

The issue also contains an account of the process whereby the New York State Psychological Association adopted a code of ethics and presents the final result of that process, as well as another code, "Principles of Professional Ethics, Cornell Studies in Social Growth," which is in actual use. As an introduction to all of this, we have prepared a very brief account of what the APA has been doing about ethics during the past few years.

The points of view contained in this issue are very probably not representative of the views of all psy-

chologists with respect to ethical standards. The general tenor of the issue may even be a little anti-code although it is a good guess that the vast majority of psychologists are in favor of a code, and furthermore, are in favor of the particular code they themselves have helped to draft. Psychologists who are opposed to something are more often motivated to compose than are those who are happy with the way things are going. This tendency may be reflected in the contents of this issue. Nonrepresentative points of view, however, can still be provocative and can contribute to psychologists' attempts to meet their problems honestly and well. We in the Central Office have a chronic belief in the long-term value of enlightened uncertainty and we persist in our faith that psychologists have great ability both to tolerate and profit by ambiguities.

There may be many other things that could have been said about the general philosophy of a code of ethics and about the specific code proposed by the Committee on Ethical Standards. Our hope is that by devoting a part of this issue of the *American Psychologist* to a consideration of some aspects of ethics we will facilitate members of the APA in their thinking about the proposed code and encourage them to communicate their thoughts to the members of the Council who represent them.—Ed.

A LITTLE RECENT HISTORY²

Although concern with problems of ethical behavior has been a relatively recent development in psychology, a quick review of some of the APA's history of the past few years may help to show how we have reached the point at which we must now decide on a code of ethics.

In 1938 the APA created a special Committee on Scientific and Professional Ethics. The Committee apparently spent its first year simply in getting organized, but in 1939 it was instructed to consider whether or not the APA should have a code of ethics to serve as a guide to its Members and Associates. Although this Committee was not formally empowered to receive and investigate complaints of unethical behavior, it did begin almost immediately to receive such complaints and to deal with them privately and informally. Probably as a result of the fact that it found itself with necessary and important work to do, the Committee

recommended in 1940 that a standing committee be appointed to deal with charges of unethical behavior of psychologists. At the same time as this recommendation was made, the Committee reported, in response to the instructions it had received, that it did not feel that the time was ripe for the Association to adopt a formal code. It did say, though, that the standing committee should, as its work continued, formulate certain rules or principles regarding ethical behavior and submit them to the Association for approval. As a result of these recommendations, the Committee on Scientific and Professional Ethics was made a standing committee of the APA and for several years it continued to handle complaints on this rather informal basis. That the Association as a whole was still concerned with a code of ethics during these years seems to be shown by its vote, in 1943, that the Committee make an attempt to codify some of its practices on the basis of the cases it had been dealing with.

It was not until 1947 that the Association again seemed to become really worried over ethical problems. In that year the Committee on Scientific and Professional Ethics strongly recommended that the Association adopt an ethical code. They pointed out that whereas ten years earlier it had been true that a code

² In the interests of conserving space, avoiding repetition, and increasing readability we have decided not to document this material with specific references. Readers interested in locating the original sources may find them in the proceedings of the APA meetings published in the *Psychological Bulletin* from 1938 through 1945 and in the *American Psychologist* from 1946 on.—Ed.

would probably have been premature, in 1947 professional psychology had grown so rapidly that a set of formal standards, especially for those who were active in clinical and consulting psychology, was needed. In making this recommendation the Committee listed several examples of cases in which they, as a Committee, wanted the guidance of the whole Association before coming to a decision. "The present unwritten code," said the Committee, "is tenuous, elusive, and unsatisfactory."

The Board of Directors, this same year, authorized the appointment of a Committee on Ethical Standards for Psychology whose goal it would be to draft a code of ethics for psychologists. Since 1947, then, the APA has had two groups dealing with the problems of ethics. One has been a standing committee which has received charges against psychologists and acted on them; the other has been a special committee appointed for the specific purpose of drafting a code. Although they have both been dealing with very much the same general problems, they have worked along as two independent committees.

During the past five years while the Committee on Ethical Standards for Psychology has been engaged in its task of developing a code, the Committee on Scientific and Professional Ethics has continued to handle ethical cases in much the same way as previously. There have been, however, a few refinements in its procedures which have affected its activities. In its 1949 report the Committee recommended several principles which it felt were necessary to guide its actions, and the Council of Representatives approved the following procedures: The Committee may take disciplinary action in cases where there is (a) evidence of a violation of the ordinary legal or moral code, which affects professional work (e.g., dishonesty), and (b) evidence of a violation of a code of another profession if the conduct expected of a psychologist and a member of the other profession is clearly parallel (e.g., revealing a client's confidences). If these two situations do not apply, then the Committee may follow these procedures: if in the judgment of the Committee the conduct of a member is seriously lacking in professional or ethical propriety, the Committee would (a) notify the member and ask him to justify his behavior or to cease acting in this way, (b) publish a note in the *American Psychologist*, describing the type of behavior, but not identifying the violator, and announcing the intention of the Committee to recommend to the Council at its next meeting that it rule that the APA consider this type of behavior unethical and subject to disciplinary action. The ruling was not to go into effect until six months after Council action, and various provisions were made for hearings and full and open investigations, if requested, of the alleged violation.

Although not specifically labeled an ethical decision, one of the Council's actions at the 1949 meeting had clear ethical implications in stating an official APA position on an aspect of professional practice. At that time the Council declared:

We are opposed to the practice of psychotherapy (not to include remedial teaching, vocational and educational counseling) by clinical psychologists that does not meet conditions of genuine collaboration with physicians most qualified to deal with borderline problems which occur (e.g., differential diagnosis, intercurrent organic disease, psychosomatic problems, etc.).

The report of the Committee on Scientific and Professional Ethics in 1950 went even farther in refining its procedures. Because this report goes into some detail in outlining (a) the methods whereby complaints are received and filed, (b) procedures for handling complaints involving non-members, applicants, and members, (c) handling of the investigation of cases and clearance of cases considered by the Committee, etc., no attempt will be made here to summarize all of the points covered. It might be mentioned, however, that the Committee acquired a "secretary," who is also the Executive Secretary of the Association, to handle much of its more routine work involving correspondence, filing of cases, etc. This report, also, apparently for the first time brought up the ethical problem among applicants to the Association, and declared that such cases were under the jurisdiction of whatever committee or board was appointed to handle membership applications. In other words, this Committee would not deal with charges of unethical behavior on the part of applicants, unless a case were specifically referred to it by the Board of Directors.

That unethical conduct on the part of applicants was becoming a problem is also evidenced by the fact that at its 1951 meeting the Council of Representatives voted to require endorsers of applicants to state whether they knew of any unethical conduct on the part of the applicant.

In 1951 also, on recommendation of the Committee on Scientific and Professional Ethics the Council voted to mail to all members a statement regarding caution in the use of the name of the APA in advertising and letterheads.

And finally, in 1951 one more important action concerning ethics was taken when the Association approved several revisions in its By-Laws. Until this time there had been no regularized provision for the dropping of a member. The revised By-Laws stipulate that a member may be expelled only after three-fourths of the members of the Council present at its regular meeting have voted for expulsion, and outline the procedures whereby a case against a member is brought to the Council for action. It might be mentioned here also—just to keep the record straight—that under the new

By-Laws the name of the Committee on Scientific and Professional Ethics became the Committee on Scientific and Professional Ethics and Conduct.

Here then is where the Association stands as far as its official actions on ethics and handling of actual cases of unethical behavior are concerned. What about the code of ethics and the Committee which has been working on its development?

After the first general and organizational meetings, the Committee on Ethical Standards for Psychology decided to use an empirical rather than a philosophical or logical "armchair" approach in developing the code. Nicholas Hobbs described the Committee's plans in his 1948 article in the *American Psychologist*. He argued that the processes by which the code was developed, rather than the code itself, would be the most significant aspect of it. By following the empirical approach the Committee felt that all psychologists would be called upon to contribute data to the development of a code, all psychologists would become involved in its development, and the final product would be "a code of ethics indigenous to psychology, a code that could be truly lived." Shortly thereafter the Committee proceeded to send out letters to all APA members asking them to submit instances of behavior that involved an ethical choice. Both "positive" and "negative" examples were solicited. Although many members responded to this first request, a follow-up letter was also sent. As a result the Committee collected over a thousand "incidents" to use as raw material in making up the proposed code. The Committee had, by this time, acquired several subcommittees to work on various aspects of the code for various areas of psychological activity. These subcommittees set about to

study the many incidents reported, organize them, and formulate principles of ethical behavior based upon these specific incidents. From time to time, the reports of these subcommittees have been published in the *American Psychologist*, the final group of reports appearing in the November 1951 issue. Throughout its work on the code the Committee has urged all members of the APA to read it, to think about it, and to send the Committee their comments, criticisms, and suggestions for changes. Psychology departments have been encouraged to hold both faculty and graduate student discussions of the code, and the opinions of state psychological associations and other local groups have been solicited. That many psychologists have responded is shown by the many letters received by the Committee and the voluminous correspondence carried on by its Chairman.

Meanwhile, a special subcommittee to work out principles to provide a guide for the sale and use of psychological tests worked rapidly ahead to develop a set of standards in that area. A preliminary proposal of standards was published in the November 1949 *American Psychologist*, and in 1950 the Council of Representatives approved the standards as published in the November 1950 *American Psychologist*. This is the only set of standards that has been formally adopted by the APA. All other aspects of the code are still in the proposal stage.

The Committee is now working to revise the proposed code in the light of the many suggestions it has received. In September 1952 the final revision of the code will be presented to the Council of Representatives for its consideration and for such action as it may wish to take.

SOME ARGUMENTS FOR A CODE OF ETHICS

It is understandable and desirable that there has been much discussion over the nature and content of the ethical standards for psychology. It is somewhat surprising, though, to learn that some psychologists are asking at this time whether or not it is wise and desirable to adopt an ethical code. Such a question is a basic one, much more important than dissatisfaction over one or more provisions of the document. Nobody can claim that the present proposals represent final wisdom. Provision has been made for future changes; it is to be hoped that such changes will in fact be made. Many psychologists feel, however, that failure to adopt any code at all would represent a serious error in judgment concerning the needs of our science and of our profession. The reasons for a

formally stated and officially adopted ethical code are not particularly profound, but the statement of a few of the important ones appears to be desirable at this time.

First, it is clear that psychology is today a profession as well as a scientific discipline. A profession must be characterized in part by a primary concern with the welfare and protection of the public which it serves. Psychology, like any profession, must therefore concern itself with all of the arrangements which assure that the interests of those who are served will be placed above the interests of those who constitute the profession's membership.

It is not enough, among other things, to promote the best possible standards of training and to deal

with the legal problems of certification or licensure. Our profession must, in addition, state clearly and explicitly the ethical frame of reference by which our members choose to govern themselves in the exercise of their professional activities. Failure to formulate and adopt the best code of ethics of which we can conceive would represent a real indication of irresponsibility which would reflect unfavorably upon psychology, not only as a profession, but as a science as well.

Second, to ethically motivated psychologists (and they represent the overwhelming majority), a code of ethics is both reassuring and of great pragmatic value. Without the crystallization of our profession's best thinking concerning ethical problems, each psychologist could solve for himself, through his own thinking and through his own experience, the problems of professional conduct. To proceed in this manner, though, is to deny in part to each new generation of psychologists the experience and thinking of its predecessors. Such an arrangement is wasteful and inefficient. Furthermore, if we fail to state our present concepts of ethical practice, we assure that the ethical concepts of tomorrow or

of ten years hence will not be as refined and as adequate as would otherwise be possible.

Finally, psychology, by adopting a set of ethical principles, can go far toward solving many of the problems of interprofessional relationships. Any two professions can establish a relationship only by developing agreed upon ways of working together. Each profession has, therefore, a right to require some dependable expectations of the other concerning areas of competence, levels of competence, and the ethical controls operating in the other group. Agreed upon uniformities within any one profession represent the basis upon which interprofessional arrangements can be reached. Each profession must decide for itself what others may expect of it as a group; but unless each profession makes it clear what these expectations are, no lasting and satisfactory relationships with other professions can be established.

The above reasons for supporting the adoption of a code of ethics by our profession are not exhaustive. They do appear to the writer, though, to represent a reasonably sufficient justification for our profession taking this step.

JOSEPH M. BOBBITT

COMMENTS ON THE TRAINING OF GRADUATE STUDENTS IN ETHICS IN PSYCHOLOGY

For the past few years the staff of the department of psychology at the University of Maryland has conducted a course concerned primarily with the general topic of psychological science. It is a cooperative endeavor, responsibility for which is shared jointly by the members of the staff. This course is required of all new graduate students who are candidates for the master's degree and can be elected by selected senior majors whose intent it is to continue graduate training in psychology. The primary function of the course is to acquaint new graduate students with the field of psychology and to present to them the manifold problems that attend the practice of professional psychology. Although the mode of presentation of the material and the nature of the contributions required of the individual students have changed materially during the past few years, the content of the course has changed very little.

One of the areas in which the staff has consistently presented material has been ethics in psy-

chology. Several two-hour periods of discussion have been devoted to this topic each year, and the staff has been pleasantly surprised at the generally favorable response accorded it. Our procedure has been to require reasonably extensive preparation prior to each session, the materials being drawn primarily from articles appearing in the *American Psychologist*. These sessions have consistently produced lively discussion among the students, and a variety of good questions directed at the members of the staff. This, of course, is more or less what one might expect, since ethics is a discussion topic which generates many more questions than answers. A better criterion of the interest the topic holds for students, however, is contained in their individual evaluations of the course which are asked for at the last session. Many students mention this topic as being one of special interest to them; as yielding information about problems that they did not know existed; and as contributing markedly to their realization that professional

psychology was something more than a collection of operations performed in a moral vacuum.

We must confess that this topic was introduced into the course only after considerable debate, since certain members of the staff were of the opinion that this material would be uninteresting as well as valueless to students, and we could better spend our time on material with some meat in it. Our first awareness of its significance came

when we observed that students drifted into this topic whenever an opportunity was presented. Our efforts to restrict its discussion met with little success. On the basis of our experience we are forced to conclude that ethics is an important consideration in professional psychology and appears as an important problem to students very early in their graduate training.

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CROOKS, CODES, AND CANT

I am opposed to a code of ethics for psychology. When I first began thinking about the matter back in 1949, I thought I was merely opposed to the type of empirical approach the Committee had decided to adopt in formulating a code. Proceeding without any clear definition of terms or any conceptual framework from which propositions might be derived, the Committee using empiricism has assembled a hodgepodge of particulars most of which have little or nothing to do with ethics as I see it.

After thinking the matter over, I have arrived at the conclusion that I am opposed to any type of code, even one which might be formulated using the best methodological principles. I am opposed to a code because I think it plays into the hands of crooks on the one hand and because it makes those who are covered by the code feel smug and sanctimonious on the other hand. The crooked operator reads the code to see how much he can get away with, and since any code is bound to be filled with ambiguities and omissions, he can rationalize his unethical conduct by pointing to the code and saying, "See, it doesn't tell me I can't do this," or "I can interpret this to mean what I want it to mean." I am convinced that laws are made for the benefit of the lawless and not for the lawful and that the "Psychologists' Code" if it is adopted will give aid to our errant brothers by suggesting opportunities for shady practices. Decent mature people do not need to be told how to conduct themselves. This does not mean that even decent mature people do not have their lapses from grace, but they always know when they are violating values of decency. Yet in spite of this knowledge they transgress. Ethical standards will not help such people to be more decent since it is not in-

formation they need but more efficient inner controls. Accordingly, I am convinced that the adoption of a code for psychologists will actually do more harm than good to our profession.

There is another side to the question, a less important one perhaps, but one which makes me feel uncomfortable. From intrapersonal and interpersonal experiences I think I know a little about the moral failure of man and how he tries to rationalize his failure by clothing himself in the hypocritical and sanctimonious garments of rites and prayers. He projects an image of his own conscience before which he makes ritualistic obeisances so that he can say, "See how good I am." This is cant. I am sure that, if and when a code is adopted, thousands of psychologists will glow with inner pride because they have a graven image which they can show to the world as tangible proof of the highmindedness of our profession. This graven image will be our Sunday god which is paraded through the streets as a public exhibition of our moral purity. Occasionally we shall turn up a heretic and crucify him for the purpose of purifying our professional souls. How clean and righteous we shall all feel then!

I think I can accept everything about man except his hypocrisy, since it is hypocrisy which alienates man from himself. Man alienated from himself is prevented from laying the foundation for rational and mature conduct through self-discovery.

If it is necessary to have a device by which the most flagrant miscreants can be ejected from the APA, I would suggest a simple statement on the application blank to this effect: "As a psychologist, I agree to conduct myself professionally according to the common rules of decency, with the under-

standing that if a jury of my peers decides that I have violated these rules, I may be expelled from the Association." Since every mature person knows in his heart what the common rules of decency are, it is not necessary to spell them out, and in fact any attempt to spell them out, as I have argued, would have bad consequences.

Finally, I would suggest that the graduate departments of psychology, who have the power to decide who shall become psychologists, should exercise this power in such a manner as to preclude the necessity for a code of ethics.

CALVIN S. HALL

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ON THE APPLICATIONS OF THE PROPOSED CODE OF ETHICAL STANDARDS FOR PSYCHOLOGY

I am writing these remarks, in my capacity as a "private citizen" of the APA, to communicate some reservations I have about the application of the proposed code of ethical standards for psychology. If my reservations primarily concerned the specific content of a few of the sections, or if I wished to suggest some minor changes in wording or style here and there, I would communicate directly with the committee which has been developing the code. As it happens, however, my major reservations actually center about the possible ways in which the code might be employed by the APA. I believe that such concerns, since they relate to matters of general policy, fall more within the province of the APA membership than within the province of the committee.

My reaction to the code, as a description of the general ethos of institutionalized psychology, tends to be quite favorable. It captures what appears to me to be the general spirit, both ethical and practical, with which we approach professional problems. Most of the sections seem to describe fairly accurately what a plurality of us, at least, usually do as well as what most of us would probably consider to be acceptable practice. I think well enough of the proposed code to recommend it as a reference to help students become acculturated to the folkways, taboos, and values of professional psychology.

However, if the code is to serve in public relations, and if it is to be distributed to other professional groups and to laymen to acquaint them with our manners and with our standards, we should scrutinize it carefully. In this connection, I would be somewhat happier if matters of good sense, good taste, and common courtesy could be separated from matters of ethics. For example, principle 6.16-1 provides that the psychology teacher should advise students to take courses on the

basis of the students' needs and not to maintain enrollment in his courses; principle 6.16-2 says, "A professor with special research resources should avoid using those resources in ways which attract students away from colleagues with whom they have more appropriately planned to work"; principle 6.13-1 urges psychologists to evaluate a student only when they have the relevant facts about him and to state that they have insufficient information to make the evaluation when this is, in fact, the case; principle 4.11-1 provides that, "The psychologist is responsible within the limits of his knowledge, competence, and facilities, for planning his research in such a way as to minimize the possibility that his findings will be misleading"; and principle 4.13-1 says, "The psychologist should never report data falsely nor discard without explanation data which may modify the interpretation of the results and conclusions he publishes."

These examples represent the sort of thing we might consider deleting from the code if it is to be distributed to the public. We all know that some psychologists are incompetent, some foolish, some grasping, and that some may be downright dishonest. The ethical "common laws" of the academic-scientific tradition and the American culture adequately proscribe the misbehaviors implied in the principles given above, however. If we, as an organization, feel that we must specifically proscribe such gross and simple-minded misconduct once again in our professional code, the uninitiated but critical reader may conclude that the APA is unduly afflicted with human frailty and that psychologists may not be trustworthy. Such a reader might be inclined to react as I did upon reading items like these and suspect that if psychologists have to be *told* not to do such things, it may do no *good* to tell them. I would argue that it would

be wiser to omit such routine prohibitions from our public code, and to let natural selection take care of our chronic offenders. The word about them will get around fast enough.

One other aspect of the code, in its public relations role, disturbs me. As I understand it, the code is supposed to epitomize and convey at least some of our ideals, aspirations, and traditions. The inclusion of the term "ethical" in the title implies this intent. If such be the case, I am somewhat concerned about the "end justifies the means" flavor that occasionally creeps into the principles. One of the clearest instances appears in principle 4.14-1 which says, "Disagreement with or dislike for the nature or implications of his research results is not sufficient reason for the psychologist to withhold from publication findings which he knows to be of value for the development of psychology as a science or for the welfare of the general public." This is a worthy standard, as is. But section A of the same principle says, "It is recognized that the psychologist may, upon occasion, anticipate that publication of his research may have social effects which he could not countenance in terms of his personal ethics and values, *and he may be justified in withholding publication on these grounds*. However, he should never take this step for reasons of personal gain or under duress from others. Where he is considering withholding publication on the basis of his personal ethics and values, he should always take the precaution of seeking the advice of competent colleagues before acting" (italics mine). Though section B provides that the psychologist, in such a case, is obliged either to do additional research to minimize the possibility that his results will be misunderstood or misused or to urge others to do such research, the "end justifies the means" flavor of section A is by no means erased. The reader may easily retain the impression that psychologists think it is "all right" to suppress information as long as the suppression is in the service of unspecified "higher" standards and is not done simply for money or in order to avoid pain, as long as the responsibility for the decision is shared.

This principle probably reflects quite accurately the way in which psychologists usually *do* handle conflicts of this sort. For this reason, the principle may be acceptable as reference material for the acculturation of our students, provided enough psychologists agree to it. Psychologists do seem to

employ a sort of watered-down pragmatism in their day-to-day ethical decisions. But to imply in any way, in a public document, that our everyday compromises represent any sort of ideal or aspiration would be to undermine what is finest and best in our tradition as scientists. If I were a hostile outsider, if I did not have first-hand knowledge of the soul-searching some of my colleagues have endured in deciding what to do with their research findings, I would be inclined to suspect that one could not depend upon the published psychological research to give a balanced picture of the status of a particular topic unless one first screened the authors for their political, humanistic, and religious prejudices. This is a serious risk to take, wittingly, if our right of free inquiry into any matter, regardless of its consequences, is to be preserved.

We all realize that the prejudices of experimenters may influence their findings in one way or another, but let us not institutionalize this by making it "all right" by official APA standards. After all, the only antidote to such personal biases is free inquiry by anybody into anything. Historically speaking, the right to free inquiry is sufficiently tender and exotic that we should avoid anything which might have the unfortunate effect of jeopardizing it, either directly or indirectly.

In summary, then, I would say let us not confuse the description, for ourselves, of what we usually *do* do, with the public statement, by the APA, of what we *aspire* to do. And let us not dedicate much if any, of our public code to urging our members to be tactful, smart, sensible, and honest. These virtues should go without saying; I think we actually may harm ourselves by prescribing such commonplaces in detail.

I see the code as having quite another and equally important function—that of specifying the minimum acceptable standards of professional conduct for the guidance of the Committee on Scientific and Professional Ethics and Conduct of the APA. One section, that on the distribution of tests and diagnostic aids, has already been adopted as official policy of the APA by the Council of Representatives. Soon the other sections will be considered for similar action. We seem to be approaching a choice-point in the matter of professional standards; let us approach it carefully.

Some specification of minimum acceptable standards of professional conduct is almost mandatory to safeguard the public interest. We are more

likely to end up with a set of standards satisfactory to us if we work them out ourselves, on our own volition, than we are if we let things slide. Other professional and civic groups might feel obliged to enact policy and legislation for us and about us if we default. Both the need for such standards and our self-interest in developing them are clear. Does the proposed code meet this need?

Let us consider the answer to this question under two headings: *First*, to what extent does the code specify *minimal* standards? And *second*, does the code specify what these minimal standards are by *indicating clearly what is forbidden* (i.e., what acts or failure to act constitute a violation of the minimal standards)? To my eyes, the code appears weak on both counts.

To what extent does the code specify minimal standards? Does the code restrict itself to simple, legal minima or does it also extend over into optima and maxima? As I mentioned before, some of the principles refer to matters of good taste, courtesy, and good sense. While it is desirable that psychologists have these attributes, I am not at all sure that we would want departures from the ideal in these regards to be the basis for adverse action by the ethics committee. "Unethical" seems to me to be too strong a word to apply to stupidity, tactlessness, and ordinary discourtesy. "Unethical" may also be too strong a word to apply to failure to achieve some of the perfections specified by other principles in the code. For example, principle 2.22-1 says, "The psychologist has the responsibility of taking a definite stand in establishing his function in relation to other professions." Section A of this principle states, "A psychologist should cooperate with other professional persons and groups and accept administrative policies and decisions, but he should not accede to dictation which may interfere with professional standards of psychology or with his freedom to pursue his profession." While this principle was intended, no doubt, to encourage psychologists to establish and maintain their professional identity and integrity in instances of interprofessional conflict, it also implies that failure to make a strong enough attempt, or a successful attempt, may be a dereliction of duty and, strictly speaking, unethical.

I think that most of us would consider such a failure unfortunate and, perhaps, not representative of the best to which psychology as a profession aspires. But would we consider it "unethical"

in a strong sense, on a par with splitting fees and falsifying data, as a basis for action by the ethics committee. These latter sins probably violate what most of us consider a reasonable minimum professional propriety; most of us would probably consider that they are serious enough to warrant a reprimand or even expulsion from the APA. Would we feel the same way about "violations" of principle 2.22-1 and other principles of the same kind? The point of all this is that any code we adopt to provide the ethics committee with a set of minimum standards should distinguish explicitly between minimum standards and ideals, hopes, or traditions. If this distinction is unclear or left out, many respectable psychologists, by ordinary standards, might be open to the charge of "unethical behavior" when all they are showing is typical human frailty or lapses in good taste or good sense. Then the ethics committee would have quite a time in deciding which of the "unethical" psychologists to take action on and which to leave alone. Under these circumstances, the ethics committee and not the legislative code would be defining minimal acceptable standards.

Does the Code specify what these minimal standards are by indicating clearly what is forbidden (i.e., what acts or failures to act constitute a violation of the minimal standards)? I think we all would agree that violation of the minimal standards should be defined by acts rather than by tests based on attitudes and motives, awkward though this may be at times. Contemporary history underlines this point sufficiently so that further comment is unnecessary.

Unfortunately, a number of the principles are somewhat ambiguous and subject to wide but legitimate differences in interpretation as to exactly what is forbidden. For example, principle 6.42-1 states, "Students should be admitted to courses, and permitted to continue study in a field, only if there is good reason for believing that they have legitimate reasons for taking the course, that they have the theoretical and technical background needed, and that they are likely not to misuse what they learn." Section A says, "Instruction in techniques should be such as to give the student full awareness of limitations in his skill and knowledge." Though I agree that the positive goal of this principle is admirable, we might have considerable difficulty in agreeing on what constituted a violation of it. What is a legitimate reason: a desire to

learn; a desire to get technical training in order to make money and be self-supporting; a desire to get technical training in order to help people; a personal hunger for prestige? What is sufficient theoretical and technical background: enough to enable the student to keep up with the class; enough to enable the student to contribute actively and wisely to class discussions; or enough to reduce the antecedent probability that he will apply his knowledge in a routine, wooden, and subprofessional manner? How can we screen students, without violating their privacy, to make reasonably sure that they will not misuse what they learn? And what constitutes misuse: when a student uses a technique to make money; when he uses his knowledge somewhat unwisely and wastes his time; when he uses knowledge clumsily and with only borderline competence? The present form of the code provides no guides which clearly answer these questions.

Even so, this principle may have some practical consequences. Some psychologists appear to believe that training in therapeutic or diagnostic methods, for example, should be given only to advanced students with a great deal of background in general psychology. And preference is extended, by these psychologists, to those students who are oriented more toward research than toward service. One justification for this position is that the standard diagnostic and therapeutic methods have insufficient validity to stand alone as full-fledged professional techniques and that if they are used in a routine and mechanical manner, unfortunate results can follow. Such a view would imply that prerequisite requirements for courses can quite legitimately be employed to help police the practice of psychology by restricting the dissemination of technical knowledge. It implies that, for the most part, only those students who already know enough to recognize the weaknesses of particular techniques and who place science ahead of service should be permitted to learn much, in detail, about diagnostic and therapeutic techniques.

In contrast, other psychologists, including myself, believe that a desire to learn is a sufficient reason for taking a course and that the role of prerequisites is to ensure that all the students will have a fighting chance to profit from the course and keep up with it. This view implies that the way to police the practice of diagnosis and therapy,

to follow our example, is through regulation of its consumption or sale and not through withholding technical information—a practice that comes dangerously close to intellectual censorship. Section A, if followed competently, should provide reasonable safeguards against misuse of technical knowledge.

I do not believe it either wise or proper for proponents of either position to support their arguments by calling the opposition's view "unethical" on the basis of principle 6.42-1, or others that are like it in construction. Such a practice only confuses what is already an important and complex issue. Nor do I believe it wise for the APA to have official statements of minimum acceptable standards so written as to encourage or even permit such an extension of the term "ethical" in its strong sense. I question whether even simple statements of APA policy should be so loosely written.

By stating the principles in terms of ideals to be achieved rather than sins to be avoided, we do "accentuate the positive" and encourage people to virtue. This is good educational practice and is entirely appropriate if the code is used only for purposes of acculturating budding psychologists. But this very property of the code may also lead to failure to define "crime" tightly enough. The ethics committee would have a difficult time deciding what constituted a violation of many of the principles as they now stand. Even with carefully written laws, such determinations are hard enough, particularly in borderline cases. The ethics committee needs something much tighter than the present code if it is to function effectively and safely.

My selection of principles to illustrate points here and there does not prove the points, of course. My selection might have been biased; and the principles are quoted out of context. Proof of the points must rest upon the argument and upon what the code actually contains, taken as a whole. But the reservations I have expressed could not be satisfied by minor revisions in the text of the code. They relate more to the application of the code than to the text as such. I hope the APA will give as serious and careful consideration to the application as it does to the text. The two are interdependent and cannot be considered separately.

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ETHICAL STANDARDS AND PUBLIC RESPONSIBILITY³

The opening sentence in the code is a statement of a credo which boldly declares "*the worth of a profession is the value of its contribution to the welfare of man.*" No other credo, perhaps, is socially defensible in a culture which operates under democratic ideals. That this credo is not merely a lip service slogan is shown both by the values enunciated in the principles appearing in the code and by the concrete incidents supplied by the members upon which the code is built.

Such a welfare-of-man credo may be due to the fact that psychologists in the main are by their occupation and training more sensitive to man's needs, more self-conscious, more concerned with conscious and unconscious values than other scientific and professional groups—or maybe we are just more neurotic. For in contrast to this credo it has been frequently stated by scientists, and by their detractors as well, that the only relevant goal of science is the amoral pursuit of truth, and that considerations of social welfare are therefore nonrelevant. Probably all of us operate on the assumption, as the code frequently states or implies, that the pursuit of truth is in long time terms a social welfare undertaking. Yet it is possible that the discovered truths of science may disrupt the social mores that give a society stability or may induce changes faster than a culture can absorb and integrate them, or discovered facts may find applications in ways that are destructive of, rather than contributory to social welfare. Aware that scientific knowledge may bring in its wake power advantages, the code is attempting to force inspection of the responsibilities which go with knowledge and the power it brings.

In this era of drastic conflict, power clashes, chauvinistic hysteria, and pervasive anti-intellectualism, it is well that we be articulate to ourselves at least, about the fact that both scientific knowledgeability and ethical responsibility are characteristics we seek in ourselves and fellow members and that neither characteristic alone is sufficient.

As the introduction to the code points out, the responsibility rests concretely upon each individual member of the Association. As psychologists we know that each of us will act no more or less responsibly than our scientific training, our character

structure, and our system of values make possible. Any code, therefore, must be (as this proposed one largely is) an ideal to strive toward, an educational device to force awareness of our values, and it must be culturally central enough and realistic enough to be striven for. As I read the code it appears much more concerned with the positive values of responsibility than with a set of rules to catch those with marginal judgment and competence or those with characterological defects. Most of the quoted incidents which highlight unsound practices have implicit in them the inference of responsible standards. There are a few incidents, it is true, which exude the virtue of the contributors under the guise of an assault upon the lack of virtues of others which seem—to the nasty minded clinician making these comments—to be punishment of the projected deficiencies of the contributors. But that incidents of this sort are infrequent points to a healthy, not a compensatory and punitive, code. One can infer from it that psychologists are relatively mature persons or alternatively that Dr. Hobbs and his committee "unethically" suppressed such incidents. The first inference is pleasanter.

The code lists the major obligations of psychologists under three headings: (a) as a scientist, (b) as a practitioner, and (c) as a citizen. A fourth heading could well be added to this general section, namely, the responsibilities of the psychologist *as a teacher*, this over and above the section devoted specifically to the ethical problems in the teaching area. Many of us are teachers and upon our skills in teaching the basic values of research and the base for competence and responsibility in practice and upon our own intellectual, personal, and interpersonal integrity, or lack thereof, rests a heavy responsibility for promoting the brand of professional ethics we shall have.

Let us look in turn at each of the three categories of responsibility listed in the code.

As a Scientist

He must be committed to increasing man's knowledge of man. He must follow the tenets of scientific method; namely, (a) be objective, (b) show integrity in his procedures, and (c) fully report his work. I should like to see inserted at this point some such statement as "so that his work is capable of replication and his findings open to

³ Adapted from a paper read at an APA symposium, September 1951.

verification or modification, so that his work is open to criticism of others, stimulation of new ideas in others, and so that his findings when verified are available to the fund of substantiated knowledge which is the goal of scientific method." While it is unequivocally true that findings depend upon method, as a young and therefore a methodologically preoccupied discipline, we often, in my opinion, fail to stress adequately the goals of science, namely, verified knowledge and theoretical cogency and economy, which will lead to more research, more verified knowledge, sharpened theory, and then more research, and so on. A major responsibility is, therefore, to keep in mind the goals of science which scientific method is to serve and be on guard lest certain procedures take on (even when inappropriate) a vested interest compulsion which may sterilize scientific inquiry. Let me illustrate with an example in my own field, namely clinical and personality research, which is both in the very beginnings of the pioneering stage and additionally is concerned with complex multifactor and molar problems. Its need for objectivity is colossal. Yet careful description and documentation may at this stage yield more cogent and fruitful hypotheses and a richer fabric of interrelated facts than objective measurement until such time as we have discovered the relevant dimensions to measure. Additionally, the well-established techniques of differential psychology, for example, designed largely to compare groups, have led to many footless research undertakings in the clinical field where the problem attacked was concerned with patterns of intrapersonal organization rather than with group comparisons.

No one can disagree with the code's statement that the scientist must go where his data take him and must be on guard against social and institutional pressures and against his own needs (status, promotional, and theoretical, I assume) to arrive at particular findings. I would add also that he be on guard lest his methods become an end in themselves and not a means to the solution of vital problems.

One other comment about a reality problem arising from the tenet of full reporting of research work. The limitations of publication outlets under accelerating membership and manuscripts and high costs preclude full publication at present. That is a matter which must be handled in part on an administrative level, but better skills in condensing

should help somewhat and full reporting to colleagues should fulfill part of this obligation. The restrictions upon much government research (possibly more than is necessary) means that much of it is not fully publishable. Problems, too, are met by research workers employed by an industry which wishes to secure the competitive advantage which suppression of research findings may bring. Our welfare-of-man credo which is embedded in a competitive society appears to offer us more dilemmas than it does to other professional groups. The research chemist sells his services to industry without loss of ethical status. In many industries the research worker has contributed and is encouraged to contribute to basic science, although his research results may not have early or full publication. In fact, since promotions in industry do not depend upon publications, which often motivates the premature publications of many faculty folk, we may even learn from this some of the values of restraint. Permit me a sassy comment. I looked in vain in the code for a principle which declares that *it is highly ethical not to publish*—a poorly conceived, poorly executed, poorly written manuscript upon something of little or no theoretical or practical importance.

As a Practitioner

The code lists several responsibilities of the psychologist as a practitioner. It states that he should strive at all times to maintain the highest standards of service. The code purposely does not specify what the highest standards are since they will increase as more scientific knowledge becomes available and as the practitioner develops more skills and, through experience, more wisdom and practical knowledge. I should like to see in the code some suggestions to implement maintaining highest standards such as a responsibility to keep informed about the literature, periodic refresher courses, the participation in discussion groups which evaluate new techniques, new practices, baffling problems, etc.

The code states that since in his work the practitioner may touch intimately the lives of others, he bears a heavy social responsibility of which he should be ever cognizant. To discharge this responsibility he must repeatedly come to terms with his hierarchies of loyalties involving individuals, society, his own personal needs and those of his

profession. A principle is stated as follows, "The welfare of the profession and the individual psychologist are subordinate to the welfare of the public." Perhaps my autonomy needs motivate me but I should like to see that changed to, "The welfare of the profession and the individual psychologist should be consonant with the welfare of the public." This I believe removes an implicit assumption that the welfare interests of each are somehow competitive which I believe is not, or should not be, true.

For the practitioner, the code states that the responsibility of most weight is the welfare of the client. Again I raise the question whether the competitive implication is necessary or wise. For example, in clinical practice the welfare of a child who is brought for help must also be conceived in terms of the welfare of his family, his peers, and be consonant with the basic values which characterize the culture in which he lives. In my opinion, these welfares are not essentially competitive and the welfare of the child can be adequately and realistically fostered only by adequate appreciation of their essential consonance.

Another principle states that the practitioner must validate his procedures so that the public may be assured of dependable service. This is an inescapable demand about which I should like to comment. It raises the many-sided dilemmas involved in trying to synthesize the already established probability statements of science and the concrete situation or individual with which the practitioner must deal. Let us look at the situation of the practicing clinician as he practices his art of synthesis. Suppose he has a device which distinguishes psychotics from nonpsychotics at the one per cent level of confidence. It gives him information about psychotics and nonpsychotics in general and a first best clinical guess about his patient, but a very low level guess since the null hypothesis is not designed to predict for any given in-

dividual. It is a better guess, of course, than if no validation assessment had been made on the device. The meaning of the data on a given patient derived by one device has to be evaluated in terms of data derived from several devices and synthesized by the clinician who in a very real sense is the real tool and no better tool than his training, experience in practice, critical honesty, and constant self-checking make him. So he has the responsibility of making predictions and checking on his predictive worth. He has the additional responsibility when using his various devices to test their predictive values *for individuals*, and not be lulled into thinking he has much when he deals with probability findings of low order.

One other thing I should like to see in the code is that form of responsibility which involves willingness of the practitioner to admit limitations of competence whether they be derived from cultural prejudice or from lack of training or experience in dealing with a specific problem. As an example, there is an item in the code which says he must not refuse to give competent service to a client because of religion, politics, or ethnic derivation. I would feel it would be better stated: "If he is reluctant to treat a client because of religion, politics, ethnic derivation, etc., he has the responsibility to refer him to someone free of his cultural bias or specific incompetence."

I find that I have covered just part of the items in the first nine pages of the code! I suspect that what I have done is merely try to come to terms with my own values—certainly one of the important functions of code for each of us. And may you have as much stimulation as I've had when you study it! The power of an ethical code for this Association derives from the cumulative effects of the enriched perceptions of each member which in turn elicit sounder professional practices.

JEAN WALKER MACFARLANE
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A WRITTEN CODE OF ETHICS FOR THE APA

It is not mere coincidence that archeologists and historians are agreed that civilization advanced when Hammurabi wrote the first code in cuneiform on a stone obelisk. The British have muddled through for several centuries with their "unwritten constitution," but it has not gained the respect

or probably been as effectively democratic as our written American constitution.

A group forestalls star chamber convictions by stating publicly in advance what it stands for and what it opposes. *Ex post facto* actions are contrary to the spirit of democracy. Until the APA

Council officially approves a written code of ethics, the Committee on Scientific and Professional Ethics and Conduct will be forced to continue its uneasy tradition of making only *ex post facto* judgments. Up to now it has never been able to distinguish professionally and scientifically acceptable conduct from unacceptable activities until charges have been brought in a specific case. Over the Supreme Court Building in Washington is inscribed "Equal Justice Under Law," which subtly protests against an earlier era of irresponsible monarchy when the whims of the king and his agents were the state and the law. No one knew when he was going to transgress because there were no guides for action. Until the APA has a written code of ethics it will be hard for any psychologist, no matter how conscientious, to determine what sort of advertising, what sort of action toward clients, what sort of care of animals, what sort of instructions to subjects, or what sort of use of tests is acceptable to his colleagues and considered in the best interests of society.

Written codes limit the individual initiative of psychologists. That is true, but it is less important than the fact that codes protect those whom psychologists influence.

Written codes make for rigid, legalistic interpretations of action. Not necessarily, if the administering committee is humane, wise, and judicial. And even rigidity, which can be avoided, is better than capriciousness.

A written code is arbitrary and inflexible. Perhaps. But it is also possible that it will be more carefully considered and more amenable to change than an unwritten code. The unwritten taboos of a society often lurk after their function dies.

In recent centuries lawyers have realized the democratic importance of recording the common will. In recent decades major American professional and trade organizations have recognized the same fact. So should the APA.

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ETHICAL STANDARDS FOR PROFESSIONAL PSYCHOLOGISTS

If the aims of the APA, in addition to the advancement of psychology as a science, now include the support of psychology as a profession and as a means of promoting human welfare, it is reasonable to suppose that an increasingly large amount of solemn thought will be directed towards questions of manners and morals. The Committee on Ethical Standards for Psychology, for example, has already published in this JOURNAL a preliminary report which runs to more than 75,000 words (*Amer. Psychologist*, 1950, 5, 620-626; 1951, 6, 57-64, 145-166, 427-452, 626-661).

Concern with the professional ethics of clinical and practicing psychologists is natural enough and probably inevitable—perhaps more so than in the case of the American Medical Association. There are limits, however, to the amount of effort which should be spent on problems of ethics even though these problems are of importance. Too much preoccupation with ethical and professional standards of conduct may defeat its own purpose by making moral confusion worse confounded.

However strong may be the faith that there are absolute and eternal verities in the domain of ethics—a faith which I am inclined to hold to, at least on

Sundays—it must nevertheless be recognized that empirical evidence still supports more solidly the view that morals are relative to time, place, and circumstance. If such is the case, then all standards of conduct for the practice of psychology must be regarded as ever changing, and all ethical codes as subject to reinterpretation by each new generation in the light of advances made by psychology as a science and in accordance with changes in the climate of social opinion. Acceptable conduct today in the administration and interpretation of a Rorschach may be frowned upon tomorrow, and the next day a group of clinicians in Chicago may insist that the greater density of frowns in New York is a sign of moral depravity in the East.

The members of the APA Committee on Ethical Standards for Psychology might profitably consider restrictions which they could impose on their work while still trying to promote high standards of professional conduct among American psychologists. The following ideas are offered for whatever they may be worth.

1. Just so long as psychology as a profession is more of an art than a science, just so long will the

need for strict ethical standards be felt. But therein lies a paradox. If success in clinical practice depends more on tact than on fact, who can decide when innocent and skillful reconstruction of evidence has been immoral? Are Christian Scientists and psychoanalysts immoral? These are tough questions, and at present a good many members of the APA would regard them as unanswerable. Yet they cry out for an answer if a practical code of ethics is to be formulated for practicing psychologists. What needs to be done right now might therefore best be postponed until tomorrow.

In the meantime the greatest service which the members of the Committee could render psychology might be to lend their moral support (a) to research and (b) to the restriction of professional practice by members of the APA to those areas in which reliability and validity are high. For it would be a dubious service to the science of psychology if an elaborate code of professional ethics were to lead the public to believe that clinical psychology had possession of infallible skills which upon critical examination turned out to be compounded of an unpredictable mixture of trial-and-success and trial-and-error. As professional psychology becomes more of a science than an art, the need for codification of ethical standards will be correspondingly reduced.

2. Those who frame the Hippocratic oath for professional psychologists might follow the example of those wise men who wrote the Constitution of the United States. In the formulation of standards of conduct, brevity and generality are safer than specification of minute detail. The interpretations of the Constitution today are markedly different in many cases from those handed down fifty years ago, and yet the spirit of the Constitution still guides the thinking and decisions of the Supreme Court. The best code for practicing psychologists today, and for that matter the best code for all time, might be the formulation of an oath which deliberately omits reference to any specific incidents. "I will only make use of those methods and facts which, according to my ability, I consider to be for the benefit of my clients and of society, and will abstain from whatever is harmful. Into whatever homes or hospitals I enter I will go only for the benefit of my patients. I will

neither make nor show how to improve any harmful devices whatever, nor suggest any such counsel." The decision as to whether such an oath had been violated could then be left both now and in the future to state and national boards of professional psychologists and legal experts to determine.

3. In several sections of the preliminary report (*Amer. Psychologist*, 1951, 6, 427-452, 626-661) the Committee has dealt at length with standards of conduct in teaching, research, writing, and publication. In spite of the close connection between these activities and the tasks of professional psychology, it would certainly be better for this Committee and all other committees of the APA to define their own business and then mind it. Questions relating to the marking of examinations, the posting of grades, the behavior of instructors in the classroom, the acknowledgment of indebtedness to colleagues, the preparation of lectures, absences from class without sufficient cause, etc., "frequently extend beyond matters of competence and become matters of ethical concern" (*Ibid.*, p. 657). They do indeed, but their therapy is no direct concern of the APA. "One member of the psychology department in a university arranged with students to supervise their investigation of problems in the special field of another staff member. He used the equipment and facilities normally controlled by the second professor without consulting him, even though that professor was making his normal use of the equipment and materials in his regular work. The impression left with students and faculty was that he considered himself more competent in this area than his colleague who was regularly responsible for this area" (*Ibid.*, p. 429 f.). Grievances of this kind, some of them trivial, others irrelevant, most of them matters of taste and expediency rather than of ethics, could be collected *ad nauseam et infinitum* from querulous and snappish college professors, but they are out of place in a general code of ethics designed for the guidance of clinical psychologists.

Unethical conduct in the domain of scientific research may occur more frequently than one likes to think, but in the long run the remedy lies within the methodology of science itself, not in the application of external restraints. The chain of science is stronger than its weakest link, for the mistakes of the individual scientist, whether deliberate or

accidental, will eventually be discovered and broadcast by some doubting Thomas. Truth will out. And so will professional sin, provided those who serve in the profession of psychology are carefully

selected and are dedicated to the use of tried and true methods in the promotion of human welfare.

CARROLL C. PRATT

Princeton University

A CODE OF ETHICS IS NEEDED

In the early years of the American Psychological Association, the problems of ethics were relatively simple. We were essentially an organization of college teachers. The only ethical problems which seemed to present themselves were those of plagiarism and of academic freedom. The first of these was usually argued back and forth in the journals, or ended in a resignation from the Association by the disgruntled party, while the handling of the second problem has gradually been taken over by such less specialized organizations as the American Association of University Professors.

In the last two or three decades, however, the picture has changed. Psychologists are professionally engaged in types of activity which bring them into new relationships with commercial employers, governmental departments of all sorts and levels, other professions such as education, medicine, and social work, and with the public generally in the role of private practitioners. Just as college teaching involved ethical questions of academic freedom, and research activities raised ethical problems of originality, priority of discovery or publication, improper use of the work or ideas of others, and the like, so now these new professional relationships each raise new ethical questions. If, as we believe, we are a profession, our colleagues in related fields look to us to develop standards of conduct befitting the status which we claim. They also look to us to take up the task of policing ourselves in accord with those standards.

It was to perform this task that the Committee on Scientific and Professional Ethics and Conduct was created. This standing committee with rotating membership is charged not only with the investigation of cases of alleged unethical conduct, but also with the duty of prosecuting, when necessary, toward punitive action the exceptional recalcitrant member who persists even after persuasive treatment in "conduct which in anywise tends to injure the Association or to affect adversely its reputation or which is contrary to or destructive of

its object." Actually, the instances of improper or unethical conduct, while they often seem numerous to the members of your committee, are very few when our membership of some ten thousand is considered. But it is just these few who far too often drag the name and reputation of psychology in the mud. It is by these few that the remainder of us may be judged at the hands of the public and of our brother professions.

The committee, then, has before it the task of telling members what they may or, more often, may not do in their work, the work by which they earn their livelihood. It is inevitable under these conditions that differences of opinion arise as to what behavior is or is not consistent with a standard of ethical professional conduct. Who is to decide? Is this wholly the role of the standing committee? In such cases, then, the committee frequently has had to act as the legislative body, the prosecutors, the jury, and the judge. The amendments to our By-Laws adopted last year finally transferred the judicial functions to the Council in those rare instances involving the extreme penalty of expulsion, but still left in the committee an incongruous combination of legislative and judicial functions. So long as the committee has no code of ethics to act as its guide, it must both make the rules and enforce them.

One or two simple examples may illustrate the point. A few years ago, the ethics committee had before it for a hearing a psychologist (no longer a member of the Association) accused of advertising of a grossly unprofessional nature who pleaded that he did not know and had no means of learning that the material which he sent out could be considered unethical in nature. In other instances, the committee has had to take up with numerous individuals the matter of using their membership in the Association on letterheads or other printed material in such wise as to suggest that it was a certification of competence. A "Caution" regarding this practice has been published in this JOURNAL

and a copy is now sent to each new member. Nevertheless, several of our members have tried to justify their practices on the basis that the published "Caution" has no legal effect and is therefore not a canon of ethical conduct.

Perhaps these considerations may be put in another way. We, as psychologists, wish to see that our fellow psychologists act according to the "rules of the game" and appoint a committee to act as policemen. But what are the rules? Can a member be brought to the bar of justice for not playing according to the rules until the latter are codified, published, and made available to him? Or, does the enforcing body make a new rule to meet the needs of each case?

It is exactly to avoid these difficulties that a code of ethics is urgently needed. An experience of several years in the work of the ethics committee has shown again and again that its hands are tied and its attempts to police professional psychology are hampered by the lack of a published code by which the behavior of ourselves and our colleagues can be regulated and judged. Only when such a code is available will it be possible for psychology to hold up its head among professions and to say that it has standards which the national organization attempts to maintain.

GILBERT J. RICH, *Chairman*
Committee on Scientific and
Professional Ethics and Conduct

PSYCHOLOGY: SCIENCE AND/OR PROFESSION

Let me set before you three occupational models: a science, a business, and a profession. Each of these, in the purest case, shows a system of social interaction different from the others in crucial respects. There are other models, but these appear the most useful ones to those who are discussing the institutional aspect of the occupation of psychology.

Scientists, in the purest case, do not have clients. They discover, systematize, and communicate knowledge about some order of phenomena. They may be guided by a faith that society at large and in the long run will benefit from continued increase of knowledge about nature; but the various actions of the scientist, *qua* scientist, are undertaken because they add to knowledge, not because of any immediate benefit to any individual or group which may be considered his client. The test of the scientists' work lies in convincing communication of it to colleagues, communication so full and so precise that any of them can undertake to test the validity of claimed findings by following the same procedures. Scientists chafe under secrecy. If laymen do not receive full report of work done, it is simply because they are not sophisticated enough to understand the report. The great point in the scientist's code is full and honest reporting to his colleagues, and, with it, willingness to submit to full criticism. Since this is so, and since no client is involved, scientists ordinarily do not seek the protection of state license. Informal controls are sufficient.

The second model is that of a business. In purest form, business goes on among traders. Since the customer is also a trader, he is presumed to be as sophisticated about the object traded in as is the seller. The trading is a game. The principle of *caveat emptor* can apply without injury to anyone. As in all games, however, there are rules designed to allow the game to continue. There is no sense letting anyone in who has not the resources to make good his deals, nor the skill to keep the game going. Hence, stock exchanges have limited memberships. But the state and the public are not especially considered in making the rules of entrance to the game and the rules of play.

Not all business is of this pure form, for goods are eventually sold to an amateur, a consumer. The consumer may know what he likes, but he is not expected to be as good a judge of what he buys as is the man who sold it to him. He expects some little protection from unscrupulous sellers who would impose upon his ignorance. *Caveat emptor* tends to be limited, but not completely—witness the tongue-in-cheek "pitch" of advertising. The customer often, in moments of annoyance, initiates action to license sellers or to otherwise protect the customers from them. I introduce this model merely to highlight the third, that of a profession.

The people in a profession make their living by giving an esoteric service. Nowadays it is commonly said that the service is based upon a science or, as in the case of engineering and medicine, a

number of sciences. The essence of the matter appears, however, to be that the client is not in a position to judge for himself the quality of the service he receives. He comes to the professional because he has met a problem which he cannot himself handle. It may be a matter of life or death for himself or a loved one; of gaining or losing a family farm, or one's freedom and reputation; of having one's dream of a house turn into wonderful reality or a white elephant. He has some idea of the result he wants; little, of the means or even of the possibility of attaining it. Indeed, he may want an impossible result, and be bitterly resentful of the professional man's judgment that it is impossible. But the time comes when the physician cannot prolong a life. All patients are lost in the long run. Half of all cases contested at law are lost; there is a losing side. All professions fail in some measure to achieve what their clients want, or think they want, of them. Furthermore, members—even the best—of all professions make mistakes of judgment and of technique. The result of all this is that those in the profession do not want the principle of *caveat emptor* to apply. They do not want the client to make an individual judgment about the competence of practitioners or about the quality of work done for him. The interaction between professional and client is such that the professionals strive to keep all serious judgments of competence within the circle of recognized colleagues. A licensing system adds the support of the state to some mechanism established by the profession itself for this purpose. It is as if competence became an attribute of the profession as a whole, rather than of individuals as such. Thus the public is to be protected from its own incompetence and from its own impossible demands, in that "quacks"—who might exploit them—will not be allowed to practice. And the professional, for his part, is protected from his own mistakes and from the allegation that he may have made one, by the fiction that all licensed professionals are competent and ethical until found otherwise by their peers. The profession sets up institutions which make clients' judgments of secondary importance and colleagues' judgments paramount. These institutions will of necessity require some arrangements for secret discussion. For it is shocking and painful to clients to hear their problems discussed as objectively as must be in de-

ciding whether a professional did, in fact, show competence and whether he acted in accordance with the professional code. In such discussion the question of competence is discussed in complete separation from the outcome for the client. In protecting the reputation of the profession and the professional from unjust criticism, and in protecting the client from incompetent members of the profession, secrecy can scarcely be avoided. Secrecy and institutional sanctions thus arise in the profession as they do not in the pure science.

I have dwelt upon the professional conception because it is so highly valued in the western world, and especially in North America. The people, or some people, in many occupations have sought to have their work conform to the professional model and to be known by the professional name. Social workers, librarians, and many business occupations have tried it. The steps taken are much the same in the various instances. Courses of study are established, and, if possible, professional schools are founded and attached to universities. Prerequisites are required so that a person entering the occupation must decide to do so earlier. Eventually some body is set up to accredit schools and specify the curriculum. Devices are adopted to define more sharply who is and who is not properly in the occupation. Canons of proper practice, proper relations to clients (or employers), proper relations between colleagues, etc., are set up. Although the steps are essentially the same, the results vary greatly. The public may not accept the professional definitions and may continue to take their troubles to people not admitted to the professional group. Employers may simply hire people without consulting the professional group as to their membership or competence. Shrines and various kinds of irregular practitioners continue through the ages to treat the cases which doctors declare either incurable or imaginary. Sometimes the curriculum of the professional schools may be hardened before the techniques have really been tested in practice or in a laboratory. This happened in social work and in library schools. I do not know whether these things have happened or will do so in psychology. I only point out that they are things which do happen in the course of professionalizing occupations.

It is fairly evident that psychologists are torn between the professional and the scientific conceptions of their work. Only their enemies charge

them with pursuit of the business conception. Now medicine has been plagued by this conflict through many years. The marriage between clinic and laboratory is still an uneasy one. The wonder-working surgeon (they do work wonders) is still not quite at ease with the sceptical pathologist down in the laboratory. The practicing physician, meeting as best he can the emergencies of patients who refuse to get made-to-order troubles, feels inferior before his patient and learned brethren of the great research schools and foundations; he also resents their detached, leisurely criticism of his hasty blunders.

The medical solution, at least the one prevailing at present, is to instruct physicians in science but not to train them to be scientific investigators. Any physician who learns to do research in a science related to medicine, does so either in prolonged residencies in research hospitals or by taking advanced work in one or more sciences in a graduate school. There are people who believe that a great deal of the time spent in medical school is wasted, unless it be admitted that sheer initiation into the fraternity is a good way to have young men spend time. However that may be, the

medical profession has succeeded in enforcing a highly standardized curriculum upon all who would be called doctors of medicine, no matter what skills and knowledge an individual may use in his particular branch of work. Training in scientific research comes later, for the few who want it. I do not know whether psychology could institutionalize its conflict in such a way. But my point is not so much the particular solution as the fact itself that there is a continuing, deep conflict between the model of science and that of professional practice of medicine. In many individuals, it is an ambivalence.

I suspect that psychology's problem is of this order. I also think it likely that whatever solutions are arrived at will be compromises. They will be better compromises if no one has any illusions about settling the problem once and for all; if it is kept in mind that the conflict lies deep in many occupations, and that all solutions to it are tentative, based on limited time predictions about the effects of various actions.

EVERETT CHERRINGTON HUGHES
Department of Sociology
University of Chicago

EXCERPTS FROM LETTERS WRITTEN TO THE COMMITTEE

It is obviously impossible to present all, or even a small part, of the opinions that have been expressed in letters addressed to the Committee. As might be anticipated, most of the letters were enthusiastic about the proposed code and had nothing but favorable comments to make on the various sections. In general, these letters did not go into detail about the principles and incidents in the code, but were essentially expressions of agreement with the Committee and of congratulations on its work. As might probably be expected also, some of the letters were in the nature of apologies for not having had time to study the code or make comments on it. A large proportion of the letters were concerned with specific principles or incidents. Typically, these letters brought up points of disagreement, cited ambiguities and inconsistencies, or came out flatly in opposition to a proposed principle. And some of the letters dealt not so much with the content and intent of the proposed code as with phraseology and format. Although undoubtedly of great value to the Committee, these letters have not been selected for inclusion here. Rather, we have tried to find representative examples of various points of view concerning the code as a whole. Some of the excerpts discuss the

issues involved; others do no more than to raise questions which should probably be answered, or at least considered, before the code is adopted.—Ed.

In our departmental discussion the necessity of evaluating the proposed code in terms of the functions or goals desired was stressed. There was general agreement that some code would have value as a guide for personal decisions regarding professional activity and as a means of explicit examination of professional principles among psychologists. On the other hand, it was maintained that the principles of professional psychology are not at present sufficiently solidified to warrant the use of a code as a regulative device with power of enforcement. There was some question as to whether a special code for psychology is desirable since in the various roles of practitioner, scientist, and teacher, the psychologist is already subject to the value systems for all participants in such professional roles.

The proposed code does not seem to stress sufficiently the positive character of public responsi-

bility. The psychologist must continually inform and educate the public as to the nature of psychological services and approved professional practice. Legal regulation is not an end in itself, but one means of informing and protecting the public. The psychologist has the responsibility to attempt correction of conditions of misrepresentation and malpractice. The general educative obligation needs to be stressed. The public needs to be informed as to practices that *are* in accord with the declared and communicated principles of the profession. People will then be better able to detect and reject unprofessional activity.

The matter of divided allegiances and value conflicts seems to require further clarification. If the research psychologist has primary allegiance to science and the practicing psychologist to the client, what about the situation in which research is being carried on in the employment of a client? Are original research findings the property of science or the client? Related to this is the matter of personal rights in relation to research products. Do considerations of personal rights take precedence over the greater allegiance to science? Or should allegiance to the broader realm of science override considerations of less sovereign rights, personal or social? Further, can the psychologist be considered only as a professional person? What about conflicts between professional and personal obligations? Is it unethical to continue association with "unethical" practices when they provide the only available means of maintaining the welfare of the family, etc.? Finally, in situations of service involving risk to the client, should the obligation of decision regarding treatment lie solely with the client? Or does the psychologist as a representative of society have an obligation to influence this decision?

Concerning the section of the code on ethical standards in client relationships, the question was raised as to whether the functions and practices of clinical psychology are sufficiently well formulated to provide a basis for an ethical code. While the need for declaration of professional standards was recognized, a statement of ethical behaviors would seem to presume that such standards are already established. Thus, the principles set forth in the code seem to be too specific, while at the same time incidents are often not sufficiently clarified.

In our discussion of the sections on research, publication, and teaching the question of need for

a special code of ethics for the psychologist was raised, since the psychologist is already bound by the ethical values of the scientist and teacher. There was a suggestion that the scientific method is a value system in itself and not subservient to other ethical values.

Many of the opinions about the content of the proposed code were paradoxical in that it was considered at once too specific and not specific enough. On the one hand, there was the opinion that the code would state only general principles or values; on the other hand, the specific incidents used are often lacking in sufficient qualification of multiple issues involved.

DOROTHY C. ADKINS

University of North Carolina

If I can make any generalizations from the reactions I have had to certain of the principles, they might be three in number.

1. A code of ethics is successful only if it is the expression of the prevailing spirit and values of the overwhelming majority of the profession concerned; it cannot be treated as a set of rules or code of law, dependent for effectiveness upon rigid policing. Therefore, it seems to me that an ethical code should avoid extreme specificity which would inevitably mean that in numerous special situations various of its precise provisions might need to be violated, in the interests of abiding by its basic spirit. It would be extremely unfortunate if our intense anxiety to raise our own professional standards led us to try, by writing very specific ethical regulations, to compensate for the current lack of complete professional *esprit de corps*.

2. Any set of ethical standards established for psychology should not include tenets from the codes of other professions unless there is a definite need and justification for them. Just because the AMA, for example, regards a particular practice as ethical or unethical does not necessarily mean that we should similarly regard it.

3. The third general point that has occurred to me revolves around the danger that ethical rules or principles will encroach on an area which is really the province of technique or professional judgment. For example, principle 3.31.2, if interpreted rigorously, would seem to me to eliminate a great deal of the environmental manipulation which makes up a sizeable portion of short-term

therapy, especially that done in schools and institutions. Now certainly, there may be questions whether or not such therapy is effective, but it had not occurred to me to consider it unethical.

JOHN D. BLACK
Counseling and Testing Center
Stanford University

The APA was originated and has up to recent times been primarily maintained as a learned society parallel with such societies as the American Chemical Society, etc. Since the main activities of members of such societies center around teaching and research, the unwritten rules of conduct for teaching and research in general have been a "code of ethics" for such organizations, including the APA. Most members of our department felt that any attempt at codifying rules of conduct applicable to teaching and research was rather banal if not downright ridiculous. It was felt that the APA should continue as an interest group and allow the traditions of scholarship and science to serve as an unwritten code for those who are engaged in teaching and research.

More recently, the APA has added to its function that of being an assemblage of professional persons. In order to meet the needs of professional psychologists, the APA has to function somewhat similarly to the American Medical Association and must adopt rules of conduct to protect both its members and members of the wider community. It is in this area that we feel almost unanimously that an adoption of a code is appropriate.

CLARENCE W. BROWN
University of California

It was the general feeling of our group that the principles which could be so precisely stated as to admit of but one interpretation were among the most helpful. In this respect there was a great divergence among the principles. Some were so vague and general as to amount to little more than an affirmation of our stand against sin. There was some suspicion, on occasion, that the vagueness was chosen in order to conceal real conflicts in values. Where such is the case it would seem wise to air the conflict or omit the principle altogether.

L. E. COLE
Oberlin College

It was suggested in our departmental discussion that the principles might take on more meaning if they were accompanied by a number of judgments or rulings about specific ethical problems which had been made on the basis of each principle. You can see the parallel to a law or a constitutional prescription accompanied by a series of judicial rulings which make the intent of the principle more concrete. This is an extension of the idea of developing the principles out of ethical incidents. The ethical incidents, as we now use them, do not satisfy perhaps, because we have been careful not to say what was judged to be ethical behavior in each case.

STUART W. COOK
New York University

Our departmental discussion raised the following questions:

1. What do we mean by "ethical standards"? Should this term be defined? In what way does it differ from general moral standards of the culture?
2. Is it wise to have principles which are so obvious as to sound naive and detract from the value of the rest of the code? Should not the code deal only with real issues, i.e., situations where the answer is not clear?
3. Is the code too detailed for our present stage of professional development? Would it be better to have fewer and more general principles?

DONALD W. FISKE
University of Chicago

With respect to research, several things occur to me. In the first place, over the past three hundred years, scientists have developed a set of criteria for the evaluation of research. Thus, the use of controls, adequate sampling procedures, attention to negative cases, and so on, have already become established criteria. Now, it appears, we are being asked to add another criterion, a moralistic one, to the ones we already have. It would seem that the morals, in this case, do nothing more than repeat the scientific cautions we have used all along. So long as we merely re-name our present criteria, no harm is done and perhaps some forensic good will result. Thus, the individual who "selects cases" in such a way as to predetermine his results is not only an incompetent fool, but he is, now, an incompetent bastard. Formerly he was only a fool, but now he is steeped in sin as well.

Perhaps some good will result from this added emphasis. On the other hand, if we attempt to carry the moralistic criteria beyond the established scientific standards, the question at once arises, whose morals? Since we have no criteria for evaluating different moral systems, we enter upon a doubtful course. I recall one proposed system of ethics for clinical psychology that, in effect, made it sinful to do anything but nondirective counseling. Could we not arrive at a similar thing in experimental psychology? In any such conflict of moral principles, how shall we arrive at a decision between them? What shall we do then? We could take a vote, but this seems a very peculiar way for science to progress.

ARTHUR L. IRION
Tulane University

The code fails to distinguish among the various levels of conduct. Our study of the code reveals three distinct levels of conduct, which we would describe and label as follows:

1. Basic principles of conduct: What is the fundamental moral obligation, binding independently of any code, the opposite of which would be a violation of conscience and a moral fault? (Example: the confidentiality of a client-therapist relationship.)

2. Professional conduct: What is approved professional practice, the opposite of which would be unprofessional, but not a violation of conscience? (Example: direct solicitation of clients.)

3. Etiquette: What is a matter of courteous conduct, the opposite of which would be impolite, but neither a violation of conscience nor strictly unprofessional conduct. (Example: consulting a colleague before initiating work in his field.)

Putting all these three levels of conduct together without differentiation tends to reduce all three to the lowest common denominator. In other words, it tends to reduce the code of ethics to a code of etiquette.

A further necessity for differentiation among the provisions of the code will arise from the attempt to invoke sanctions. In this connection, we would designate the three levels distinguished above as follows:

1. Basic principles of conduct: Binding.
2. Professional conduct: Expected.
3. Etiquette: Recommended.

We would anticipate that the first level would be clearly enforceable and the third level clearly unenforceable. The intermediate level would probably be enforceable, at least in many of its provisions. However, an indiscriminate attempt to enforce the code as a whole might prejudice the entire attempt at sanctions.

JOSEPH G. KEEGAN, S.J.
Chairman, Special Committee
Fordham University

In reviewing the sections on research, writing, and publishing a special committee of psychologists in California made the following comments:

1. Is the code to serve as a set of regulations to be enforced with penalties? If so, many of the items would be impossible to obtain clear-cut evidence about. For example, principle 4.12-1: How could one determine whether a piece of research was conducted in a "manner inferior to that of which the individual psychologist is capable." If the items are intended to be admonitions and possibly used in conjunction with graduate training in psychology, they might serve a useful purpose even though they could not be officially enforced.

2. In the submission of the code to the members of the APA it should be made very clear what the members are being asked to approve and what the consequences of approval are.

3. Perhaps samples on the "ambiguity rating" of the items should be made, since there was wide divergence in the members of the committee as to the meaning and significance of several of the principles.

4. The question was raised of whether it is really possible to get at the most unethical behavior of members of a profession.

5. The committee was of the belief that in most instances the question of violation of a principle depended on the determination of intent on the part of the psychologist. This factor could obviously only be ascertained by careful study and investigation of the individual case. Are such procedures to be provided for in the code?

F. THEODORE PERKINS
Chairman, Special Committee
California State Psychological Association

The writing, after the period of debate is over, should be more terse and dogmatic in tone, especially in the statement of problems and principles.

As they stand, they strike me as being overly verbose and circumlocutious.

I also feel that the entire section (section 3) is too much on the timid and permissive side. Imperatives are needed in a code of ethics, even if the code is admirably and democratically derived and constructed. Otherwise, the code becomes nothing but a body of suggestions to people who may or may not accept it. A final code of ethics, even at this time, should be tough, realistic, and highly and specifically moral. Let the profession ascend to the code; the code should not descend to a low common ethical denominator. To revise a code in an upward direction after adoption and use for some years will be well-nigh impossible.

It should be remembered that this code will have a great effect educationally as well as in terms of limit setting. It is better to hog-tie, if necessary, some of the members of the profession now practicing, if at the same time the professional psychologists of the future be developed with a high aspirational and functional ethical sense of responsibility and behavior.

STANLEY S. SCHWARTZ
U. S. Army
Fort Lee, Va.

In our discussion of section 6 (teaching) the most general question raised was embodied in the

thought that much of this section was equally applicable to *all* teachers, and therefore, did not perhaps belong in a code for psychologists. It was suggested that such matters be left for a code for all teachers to be promulgated by the NEA, AAUP, or similar group, and that we confine our code to matters applying to psychology teachers, as such. However, in opposing this point of view, one member pointed out that, like it or not, many students and other members of the community regard the psychology teacher as someone special and expect special things from him, and therefore, our code should cover these eventualities.

It was also suggested that the introduction to the code should state clearly that the code is conceived by the adopting membership of the APA as (a) ideals to be striven towards or (b) binding absolutes, and there should be some statement concerning the relationship between full adherence in practice to the code and retention of APA membership. Also desirable would be a statement of the status at law, if any, of the code. One member wondered whether, in practice, some principles might come to be regarded as minor, others as major, so that their infringement would be equivalent, so to speak, to misdemeanors and felonies, respectively.

AUSTIN B. WOOD
Brooklyn College

NEW YORK ADOPTS A CODE OF ETHICS

New York State psychologists have had a long-standing interest in the problems of ethics in professional practice. One of the first efforts in the direction of a professional code was a statement entitled *Statement of Principles Concerning the Advertising of Aptitude Tests and Psychological Guidance*, which was adopted and published by the New York State Association for Applied Psychology in 1945, and made it possible to get newspapers and magazines to become more selective in their consideration of psychological advertising. With the activities of the APA Committee on Ethical Standards as a stimulus, NYSPA decided to go ahead with a formulation of a code of ethical standards. It was felt that this could be done more quickly in a smaller organization than in APA and that the experiences involved might serve as a useful pilot project for the profession as a whole.

When the idea was proposed to Dr. Nicholas Hobbs, he approved of it. Finally, there was the pressure of trying to do something about the many complaints about unprofessional conduct that came to the attention of the state organization; accumulated experience had demonstrated how little could be done in such cases if there were no code of ethics to consult.

At the annual meeting of the N. Y. State Psychological Association in February, 1950, the development of a code was officially approved and this task was made the main function of the Committee on Professional Ethics.⁴ The Committee decided to use all previous material that was relevant. The most valuable source available at that

⁴ Fred Brown, Marion F. Cowin, Albert Ellis, Leonard W. Ferguson (sec.), Raymond A. Katzell, Albert S. Thompson, Albert J. Harris (chairman).

time was Section 3 of the tentative code formulated by the Hobbs Committee. In addition, the publications of the National Vocational Guidance Association were consulted.

The first step involved circulation to each member of the committee a copy of the principles contained in the APA Committee's report: Section 3, Psychological Standards in Clinical and Consulting Relationships. After allowing time for individual study, the committee spent many hours considering these principles in detail. Wherever an objection was raised an attempt was made to alter wording so as to remove objection and allow unanimous agreement. Statements on which it was impossible to get unanimous agreement within the committee were temporarily discarded. It seemed desirable that, in this area of ethics where there are so many uncertainties, unanimity within a committee should be reached on any statement that was to govern the activities of the profession.

Following this meeting a revised version was proposed, circulated to the committee, and revised in minor ways on the basis of mailed comments. Then a third version was prepared, submitted to the committee for approval, then presented to the Board of Directors of NYSPA. The Board suggested further minor modifications and authorized the committee to go ahead with the presentation of this tentative code at the 1951 annual meeting.

The program for the annual meeting centered largely around discussion of the code. After a preliminary discussion of the code by the writer, the audience broke up into six section meetings, each chaired by a recognized specialist in a particular field.⁶ At each one of these group meetings a member of the Committee on Professional Ethics was present to answer questions. In the afternoon, the six discussion leaders each presented a report, listing specific suggestions made by those attending his meeting, and giving the consensus of the group. Fortunately, while several changes were recommended by the various groups, every group was in favor of the code as a whole. Following these reports, the question of action on the code was taken up during the Business Meeting. The

Committee on Professional Ethics recommended that a short period of time be allowed for members to send in additional suggestions, and that another version should then be prepared by the Committee and submitted to the Board of Directors. If approved by the Board of Directors, this version would then be submitted to the full membership for a mail ballot in which it would be possible to vote for or against individual sections of the code. After considerable discussion this plan was adopted. It was subsequently carried out, this process involving the preparation of two more revisions. Although there are some omissions, additions, and changes, the final version remains very close to the Hobbs Committee principles on which it is based. The code, entitled Ethical Standards in the Professional Practice of Psychology, was distributed to the membership in May, 1951, and was adopted by an almost unanimous vote.

The procedure which was followed in the formulation and adoption of this code represented as full a measure of democracy as the Committee found it possible to devise. To start with, the Hobbs report which provided the solid foundation for this code was already the project of a committee which had utilized the help of hundreds of psychologists. What the New York State committee attempted to do was to subject the principles which the Hobbs Committee had proposed to a searching scrutiny by psychologists representative of the great variety of special interests within the profession. As a result, some principles were dropped as being still too controversial, some were re-worded for clarity, some new ideas were introduced to take care of special problems such as advertising, and the wording was modified so as to extend it beyond clinical and consulting work and allow it to apply to the full range of professional practice.

This code has already achieved wide circulation; it has been sent to every psychologist on record in New York State and to many outside of the state who are known to be interested in ethical problems. It has already provided a means for advising puzzled psychologists on many issues regarding which they were not sure as to what the proper professional conduct should be. It has provided another kind of ammunition to help in the local efforts to achieve state licensing. Finally, it has awakened a real interest in professional ethics on the part of many psychologists who had formerly taken such problems for granted. It is hoped that our ex-

⁶ The discussion leaders were: Rollo May, Analytical Psychology; Stuart Cook, Academic Psychology; Fred Brown, Clinical Psychology; Louis Long, Counseling and Guidance; Steuart H. Britt, Industrial Psychology; Ethel L. Cornell, School Psychology.

perience may be helpful to the APA in carrying out its larger and more comprehensive professional ethics project.

ALBERT J. HARRIS
Queens College

Ethical Standards in the Professional Practice of Psychology

For Members of the New York State Psychological Association, Inc.

The New York State Psychological Association, Inc., recognizing that ethical standards are essential to a profession, subscribes to the following principles. These principles are intended as a guide in the professional practice of psychology and are not intended to apply specifically in psychological teaching or research. Intentional breach of these principles shall be considered conduct unbecoming a member of this Association.

THE PSYCHOLOGIST'S RESPONSIBILITY TO HIS CLIENT AND TO SOCIETY

Principle 1. The psychologist is primarily responsible to his client and ultimately to society; these basic loyalties must guide all his professional endeavors.

a. A client is defined as any person or organization to whom a psychologist renders professional service.

Principle 2. Individuals and agencies in psychological practice are obligated to define to those involved the nature and direction of their professional loyalties and responsibilities in any particular undertaking.

Principle 3. The psychologist, mindful of the significance of his work in the lives of other people, must strive at all times to maintain highest standards of excellence, valuing competence and integrity more than expedience or temporary success.

Principle 4. The psychologist should refuse to support invalid applications or unjustified conclusions in the use of psychological instruments or techniques.

Principle 5. It is unethical for a psychologist to offer service outside his area of training and experience or beyond his level of competence.

a. Pending the adoption of state licensing and certification by this organization, each member of this Association is obligated to restrict his unsupervised practice to those fields in which he has had adequate preparation.

b. Psychologists who shift areas of specialization are obligated first to obtain such training and experience in the new area as is necessary to ensure that the services they offer meet the same high standards expected of persons initially trained in the area.

c. A psychologist in professional practice must not use affiliations with other professional persons or with

institutions to imply a level of professional competence which exceeds that which he has actually achieved.

Principle 6. It is desirable that the professional psychologist be aware of inadequacies in his own personality which may bias his appraisals of others or distort his relationships with them. He should refrain from undertaking any activity in which he is aware that his personality limitations are likely to result in inferior professional service.

Principle 7. The maintenance of high standards of professional ethics is a responsibility which must be shared by all psychologists, in the interest of the public and of the profession as a whole. When a member of this Association becomes aware of practices likely to result in the offering of unethical professional work or in the lowering of standards for psychological services, he should bring this matter to the attention of the Committee on Professional Ethics of this Association.

THE RELATIONSHIP OF THE PSYCHOLOGIST TO HIS CLIENT

Principle 8. A cardinal obligation of the professional psychologist is to respect the integrity and fundamental convictions of, and to protect the welfare of, his client. Vigilant regard for this principle should characterize all of the work of the psychologist and pervade all his professional relationships.

Principle 9. Psychological services should not be imposed upon an individual, nor should a person be unduly urged to avail himself of such services.

a. A person is free to enter, not to enter, or to withdraw from a clinical relationship in the light of as complete a survey of the situation as the psychologist can make and the person can accept.

b. In situations where the responsibilities of the clinician are clearly defined and where competent professional persons would agree that a client or patient is incapable of making a choice in his own best interest, the principle of respecting the freedom of the individual to choose should be followed in working with the relative or guardian responsible for the incompetent client.

c. This principle is not intended to interfere with the rights of schools, institutions or agencies legally responsible for the education or welfare of individuals.

Principle 10. Clinical or consulting activities, such as administering diagnostic tests or engaging in counseling or psychotherapy, should be undertaken only in a professional and not a casual relationship.

Principle 11. The psychologist does not guarantee easy solutions or favorable outcomes as a result of his work.

a. Promises must not be made to induce a person into a professional relationship or to persuade him to

continue a professional relationship which he desires to terminate.

b. A considered and moderate description of probabilities should be given when assessing for a client the likely outcome of psychological work.

Principle 12. It is unethical to claim to have available secret techniques or procedures in psychological work.

Principle 13. Psychologists should not enter into a professional clinical relationship with persons so close that their welfare might be jeopardized by the dual relationship, such as members of the psychologist's own family or intimate friends.

a. In the case of associates, students, and acquaintances, the psychologist has the responsibility of assessing the difficulties which might ensue in establishing a clinical relationship and of refusing assistance if there is likelihood of harm to the client.

b. If a tentative decision is made to work with a person with whom the psychologist has other relationships, the nature of the situation and the possible difficulties should be carefully explained and the decision left to the person involved.

c. This principle does not bear upon supervisory relationships in the training of therapists.

Principle 14. The psychologist should guard professional confidences as a trust. He may reveal such confidences to appropriate public authorities if his most careful deliberation indicates that there is likelihood of danger to an individual or society. When possible the client should be apprised of the psychologist's intentions and an effort made to obtain the client's concurrence. In making decisions involving the principle here stated, the psychologist should be fully informed on the laws of the State of New York concerning privileged communications.

Principle 15. Information obtained in clinical or consulting relationships should be discussed only in professional consultation and with professional persons clearly concerned with the case.

a. This principle does not exclude the use of clinical materials for instructional purposes if adequate safeguards are provided.

b. The psychologist has a professional obligation to intervene in situations where a professional confidence is obviously being violated with possible harm to an individual.

c. It is undesirable generally, and in some circumstances unethical, to reveal the name of a client or to indicate that a particular individual is obtaining psychological assistance, without the permission of the person to do so, except in professional consultation.

Principle 16. When the psychologist's position is such that some departure is required from the normal expectation that clinical or consulting relationships are

confidential, it is normally advisable for the psychologist to make clear to the client's legal guardian the nature of his role.

PROCEDURES IN INTERVIEWING AND IN HANDLING CASE MATERIALS

Principle 17. A client who has accepted the services of a psychologist should be informed of those aspects of the clinical or consulting relationship, including the handling of materials derived therefrom, that might reasonably be considered important factors in the client's decision to enter or continue in the relationship. Candor in describing such circumstances and scrupulous adherence to understandings worked out with the client are essential.

Principle 18. The psychologist may give clinical information about a client only to those persons whom the client might reasonably be expected to consider a party to the psychologist's efforts to help him. The client's concurrence should be obtained before there is any communication exceeding these customary limits.

a. If the client is not competent to give this permission, the permission of parent, guardian, or other person responsible for the client should be obtained.

Principle 19. Psychological information, such as the results of tests or of a diagnostic appraisal, should be given to a client in a manner likely to be constructive in his efforts to solve his problems.

a. The giving of psychological information implies further responsibility on the part of the psychologist to assist the client to assimilate the information and put it to best possible use.

b. The psychologist may withhold information which in his judgment is likely to be detrimental to the welfare of his client.

c. The psychologist should exercise appropriate safeguards in the preparation and transmittal of reports when he is not assured that they will be used in a manner conforming to the intent of this principle.

Principle 20. Confidential professional communications should not be shown to a client without express permission of all professional persons involved.

Principle 21. The psychologist should give to other professional persons only such clinical information as they, by virtue of their professional training and individual competence, are able to understand and use in the best interest of the client.

Principle 22. When clinical information must be reported to a parent or a guardian or some other non-professional person responsible for or interested in the client, the psychologist should present it in language that facilitates assimilation, and with no attempt to exaggerate or minimize the implications of the information.

Principle 23. Clinical or consulting materials should be used in teaching and writing only when the identity of the persons involved is obscured beyond likelihood of recognition.

Principle 24. Care should be taken to ensure an appropriate setting for clinical work to protect both client and psychologist from actual or imputed harm, and the profession from censure.

FEES IN PROFESSIONAL PSYCHOLOGY

Principle 25. Fees charged by an individual or agency in the practice of psychology should be established with careful regard for the welfare of all concerned, to ensure that the client is not unduly burdened by the cost of psychological assistance, that the psychologist or the agency involved is assured of adequate recompense, and that the profession is recognized as reasonable in financial matters and worthy of public support and confidence.

Principle 26. It is unethical to continue a professional relationship with a client, for personal gain or satisfaction, or from reluctance to recognize limitations of professional effectiveness, beyond the point where it is reasonably clear to the psychologist that the client is not benefiting from the relationship.

Principle 27. A psychologist should not accept a fee, or any other form of remuneration, for professional work with a person who is, as a client of his institution or agency, entitled to his services. This does not prohibit private practice with clients who, after being informed that they are eligible for such institutional or agency service, prefer private service.

a. The policies of a particular agency may make explicit provision for private work with its clients by members of its staff, thus providing a local exception to this principle. However, the wisdom of such a policy may be questioned in view of the ambiguous position in which it places the psychologist and the division of loyalties which might ensue.

b. When extra-agency assistance is required by a client, the psychologist has responsibility for endeavoring to see that an appropriate referral is made.

Principle 28. No commission or rebate or other form of remuneration may be given or received for referral of clients for professional services.

Principle 29. The psychologist in clinical practice must not use his relationships with clients to promote, for personal gain or the profit of an agency, commercial enterprises of any kind.

Principle 30. Reduction of fees for colleagues, for professional persons in fields closely related to psychology, and for members of the families of these groups, while permitted as a custom of mutual benefit to professional persons, must remain a matter of personal choice for each individual.

a. Long-term commitments, such as may be involved in counseling or psychotherapy, should not be expected to fall in the category of services rendered as professional courtesies.

INTERPROFESSIONAL RELATIONSHIPS IN CLINICAL AND CONSULTING PRACTICE

Principle 31. In professional practice the psychologist must refer his client to an appropriate specialist when there is evidence of a difficulty with which the psychologist is not competent to deal.

a. This principle also applies with some modification when the psychologist, in other professional activities, such as research or teaching, becomes aware of the need of a person for professional attention. Here the psychologist should offer his assistance in obtaining referral.

b. When referral is contemplated, it is expected that the psychologist will discuss the matter with his client and obtain his concurrence before taking action. Preferably the client should be given the opportunity to select from several names, when a choice of professional persons is possible.

Principle 32. In cases involving referral, the responsibility of the psychologist for the welfare of the client continues until this responsibility is assumed by the professional person to whom the client is referred.

a. Full communication is to be expected between the psychologist and the professional person to whom the client is referred up to the point where the interest of the client will no longer be served by such communication.

Principle 33. In situations where referral is indicated and the client refuses referral, the psychologist must carefully weigh the possible harm to the client, and to himself and to his profession, that might ensue from continuing the relationship. If the client is in clear and imminent danger, the psychologist should insist on referral or refuse to continue the relationship. Due consideration should be given to the possibility of assisting the client through therapy to avail himself of the professional assistance needed.

Principle 34. A psychologist must not attempt to diagnose, prescribe for, treat or advise a client with reference to problems or complaints falling outside the recognized boundaries of psychological practice.

a. A psychologist offering professional services should familiarize himself with the laws of this State governing medical and legal practice, and scrupulously adhere to relevant provisions.

b. Best practice suggests that clients accepted for psychotherapy have had a physical examination to ensure that all aspects of the person's health are attended to, and that the problem dealt with by the psychologist is not beyond the limits of his competence.

Principle 35. A psychologist should not ordinarily accept for diagnosis or treatment or establish a consulting relationship with a person who is currently receiving psychological assistance from another professional worker except by agreement with the other professional worker, or after the client relationship with the other professional worker has been terminated.

a. This principle should be construed to operate primarily in the interest of the client. Allegiance to a professional group or concern for harmony in interprofessional relationships must clearly be subsidiary considerations. In some circumstances, the welfare of the client might require that the psychologist not refuse his services, even though another professional worker were involved.

ANNOUNCEMENT OF PSYCHOLOGICAL SERVICES

Principle 36. The basic principle is that the psychologist, if he makes public announcement of his services, is obligated to describe his services to the public in a dignified and accurate manner, adhering to professional rather than to commercial standards.

Principle 37. Announcement cards should be limited to a simple statement of the name, highest relevant degree, address, telephone number, office hours and a brief explanation of the types of service rendered.

Principle 38. Directory listings should be limited to name, highest relevant degree, address and telephone number. Display advertising is not approved.

Principle 39. The mention of a relevant license, diploma, certificate, or statement of approval issued by a licensing board or professional organization recognized by the New York State Psychological Association is approved if expressly permitted by the issuing body.

MALPRACTICE OF CLINICAL AND CONSULTING PSYCHOLOGY

Principle 40. In the professional practice of psychology it is unethical to employ procedures which are likely to mislead a client, provide him with erroneous

information or faulty instruction, or subject him to possible harm as a result of inferior services.

a. This principle prohibits the offering of psychological services entirely by mail, the use of untrained personnel or of mechanical devices alone in the interpretation of test results, the unguarded dissemination of psychological testing materials, the use of group procedures when individual procedures are indicated, and other practices which fail to provide adequate safeguards for the client.

b. A psychologist giving advice in regard to special problems such as school placement or occupational choice is obligated to obtain current, relevant, and available information needed for sound counseling.

Principle 41. It is unethical to employ psychological techniques for entertainment, or other reasons not consonant with the best interests of a client or with the development of psychology as a science.

Principle 42. The psychologist in the practice of his profession should show regard for the social codes and moral expectations of the people of the community in which he works. He should recognize that violations of accepted moral standards on his part may involve his clients in damaging personal conflicts, and impugn his own name and the reputation of his profession.

Principle 43. It is unethical to engage in psychological diagnosis, treatment, or advisement, either directly or by implication, by means of public lectures or demonstrations, newspaper or magazine articles, radio or television programs, or similar media.

a. This principle should not be interpreted to discourage the presentation of psychological information to the public. The issue involved here is whether the act is likely to result in harm to a person, either directly, as in the case of public demonstrations, or indirectly, as in the case where psychological analyses and recommendations are so specifically presented as to create the likelihood of persons accepting the statements as designed for their individual guidance.

PRINCIPLES OF PROFESSIONAL ETHICS* CORNELL STUDIES IN SOCIAL GROWTH

The "Principles of Professional Ethics" were developed by the members of the staff of Cornell Studies in Social Growth, a long-range program of team research sponsored by the Department of Child Development and Family Relationships in the College of Home Economics at Cornell University.* Miss Doris Kells, a clinical psychologist, had the major responsibility for

*The principles are presented here as an example of a set of ethical standards for research workers, as contrasted with the codes that have been written more specifically for the professional, practicing psychologist.—Ed.

collating ideas and preparing drafts for staff discussion. The code represents an attempt to anticipate the ethical problems likely to arise in a community study (The Springdale Project) involving extensive interviewing and observation by specially trained graduate students working under faculty supervision. The present preliminary draft was drawn up before the most intensive phase of field operations had begun. Since that time, experience has underscored two important considerations.

1. A code of professional ethics defeats its purpose

if it is treated as a set of rules to be followed without question. It is effective only to the degree that it provokes genuine consideration—and even conflict—in the mind of the individual research worker, who has a value commitment not only to professional ethics but also to scientific investigation. These two sets of values are not always harmoniously matched, so that the researcher must weigh possible scientific gains against the risks involved. Thus it is manifestly impossible to conduct meaningful social research which does not in some degree invade the privacy and security of other human beings. Therefore the responsible scientific investigator cannot avoid the conflictful question of whether the invasion which he proposes to undertake is really justified by the potential gain in scientific knowledge.

2. This leads to a second and even more difficult dilemma, namely, that the social and psychological consequences of a particular research procedure often cannot be foreseen. Thus the only safe way to avoid violating principles of professional ethics is to refrain from doing social research altogether. It follows that the scientist, having tried earnestly to recognize and weigh the social consequences of his scientific activity, must always be ready to accept responsibility for and discontinue in midpassage procedures which prove more damaging than was originally anticipated and considered justifiable.

These two considerations, while they seem in their immediate consequences to be delimiting for scientific progress, may in the long run, through establishing more viable experimenter-subject relationships and sensitizing the investigator to hitherto unrecognized variables in the experimental situation, enrich rather than impoverish our scientific insights and experimental designs.—URIE BRONFENBRENNER

Preamble: A code of ethical procedures for research operations serves a twofold purpose. The first is to safeguard the integrity and welfare of those who serve as subjects for or who may be affected by the research study. The second is to give proper and necessary recognition in the research design to the variables introduced by the presence of the research worker in the field and the consequent awareness of community members that they are under study. We are operating then on a double premise: (1) The integrity and well-being of those studied are to be vouchsafed and respected in recognition of ethical human values. (2) The ethical values implicit in any research operation and their consequent procedural expressions must be made explicit and incorporated into the research design in the interests of sound scientific method, for otherwise they would represent unknown or uncontrolled variables. Only by taking into account the ethical import of research activities can the effects of the research upon those being studied be reckoned.

It will be noted that this document contains not only a section devoted to *General Principles and Ethics in the Field* but also a section on *Relationships among Research Workers (staff and trainees)*. Here again the reason is twofold: (1) To take cognizance of ethical human values in the intragroup research operations. (2) To help insure the carrying out of the research design since the ethical values governing intragroup research relationships will tend to be reflected in the research relationships established with the community and also in the handling of data (e.g., matters of confidentiality).

I. General Principles

A. Professional ethics in research activities are a matter of first priority.

1. Progress in learning to establish adequate field relations and to apply ethical principles has first priority in evaluating trainees' continuation in the program and staff members' operations in the field.

2. Responsibility for the welfare of persons under study is a continuing one for all research workers (trainees and staff).

B. The social scientist views people as individuals, not as subjects to be exploited. Specifically, he takes every precaution to preserve the security and privacy of the individuals and groups under study.

1. Each technique developed for field use is carefully considered in terms of its potential for provoking anxiety or invading privacy. The research intent is to reduce maximally such threats.

2. The research worker in the practice of his profession shows regard for the social codes and moral expectations of the persons with whom he works.

3. To the maximum degree possible, the free consent of persons* involved is secured at each stage of research activity.

a. In requesting verbal consent, persons are given as direct and explicit an account as possible of research objectives and purposes. In requesting consent the investigator does not attempt to evoke or capitalize on feelings of obligation or desires to please.

b. Consent can be secured only in relation to those experiences the consequences of which the person is in a position to appreciate; that is, consent to an unknown experience is not regarded as true consent.

4. The basic criterion for the investigator's interest in and inclusion of all data is that they have relevance to the problem under investigation.

a. Any material given to the investigator in his role as research worker is suitable for inclusion in research

* Throughout this document "persons" refers to all those who serve as research subjects; e.g., residents of the community under study, persons being tested, college students used in pre-field trials, etc.

records. Material offered or secured in any other context is not suitable for the records. Examples of material not suitable are: (1) material given to the investigator on the assumption that he is a personal friend or counsellor, rather than a research worker; (2) material given with the specific request that it be kept off-the-record (i.e., not recorded or communicated to anyone else).

5. All data from the field are regarded as confidential and every precaution is taken to insure the anonymity of individuals and groups save as such knowledge is essential to the work of persons specifically charged with responsibility for those data.

a. Information secured about persons involved in research is used primarily for research purposes. With proper regard for anonymity it may also be used for training and instructional purposes. Information that can be *identified with* community, specific groups, or individuals is used *only* for research purposes including training. With proper regard for anonymity it may also be used for other instruction (e.g., university classes).

b. Staff and trainees have access only to those files containing data essential to their work.

c. Permission to use field data for special research problems (e.g., theses, term reports, etc.) is granted by the staff as a whole. Permission is contingent upon the worker's ability to comply with the principles of professional ethics here outlined. In each instance the worker shall be instructed in his responsibility for maintaining the confidentiality of the material with which he works.

d. Trainees are evaluated and screened with regard to their ability to be entrusted with confidential data before identifiable group or individual material is used for training purposes and before trainees go into the field.

e. Professional colleagues shall not be told the name of the community(ies) under study save as it is essential for their own work, and regard for anonymity shall be maintained in conveying information regarding research procedures, data, hypotheses, etc.

f. Research workers have the responsibility for informing and indoctrinating family members in the professional ethics of field operations.

(1) Family discussion of individuals or groups under study is to be kept at a minimum.

(2) Family participation in community affairs is to be carefully planned to enhance rather than inhibit research relationships.

g. Personal information about research subjects, whether or not these subjects are identified by name, is not an appropriate topic for discussion at social affairs, informal gatherings, conversations with friends, etc. (Discussion of the purpose of the study, the re-

search design, or any generalized findings do not, of course, come under this heading.

h. Field activities and data are not suitable topics for entertaining staff members, colleagues, visitors, students, etc. In like manner, persons or community are not exhibited as a curiosity to visitors, friends, etc.

II. *Ethics in the Field*

A. Role and responsibilities of field worker are clearly specified before the field worker goes into the field (campus, community, etc.) and changes in the conception of the job or of field worker's responsibilities are a matter for staff decision.

1. Whenever the field worker finds that circumstances require his adopting a role not covered by previous specifications, it is his responsibility to bring this to the attention of the appropriate supervisor or staff group for discussion and decision.

B. In this project, the research design limits the role of the research worker to that of scientific investigator. He is not an agent for change, a therapist, or specialist who can serve as a resource person. There are two reasons for this policy: (1) To reduce the number of complicating variables by designing the research procedures to have minimal effect on the lives of the community members. (2) To keep at a minimum any activities by staff members which may evoke feelings of conflict or anxiety.

C. It is the field worker's responsibility to keep his field role in the dimension of scientific investigator.

D. Every reasonable effort shall be made to convey to the persons under study, the nature and limits of the job of the field worker.

III. *Relationships Among Research Workers (Staff and Trainees)*

A. No research member is asked to undertake any activity which is not in harmony with his personal ethics and beliefs.

B. Any reflections upon the personality or actions of a field worker by a person involved in the research studies are considered to be a private matter. Wherever this is of vital concern to the research project, the matter should be discussed with a staff member. If the incident is to be made a part of the field report, it should be done only after discussion and agreement with the field worker concerned.

C. The responsibility of staff member to trainee is that of training him in research activities.† The training program in all its aspects is to be job-oriented.

† The functions of academic advisor, teacher of a subject-matter field, or personal counsellor, if they occur between staff member and trainee, are in the context of the staff member's role as member of the faculty or as personal acquaintance.

D. It is staff responsibility to keep clear explicitly (in training) and implicitly (in office relations, etc.) the nature of the job and responsibilities of the staff and the nature of the job and responsibilities of the trainee.

E. It is staff responsibility to keep well-structured in the minds of the trainees their status-in-training and their responsibilities in the research project.

1. It is staff responsibility to convey to the trainee at the beginning of and throughout his training, the opportunities, limits, and trial nature of his participation in the research program.

2. It is staff responsibility to conduct planned evaluation conferences with trainees sufficiently frequently to provide them with a realistic awareness of their progress and status-in-training.

F. The basis for evaluation-selection of trainees for assistantships or other jobs on the project is their performance on the job.

G. In event of evaluation-selection of trainee for assistantship or other job for which he has not had a previous trial, personal factors are considered in so far as they are pertinent to the job to be filled and have been evidenced in the trainee's performance during training.

1. Pertinent information known to a staff member by virtue of his activities and relationships outside of the research staff is not a proper subject for discussion with other staff members, but may properly influence the individual decision of that staff member in regard to the trainee's job qualifications.

H. It is staff responsibility to convey to the trainee, by precept and example, the professional ethics implicit and explicit in this document.

1. The area of professional ethics shall be included as an integral part of the training program.

EDUCATIONAL ISSUES IN PSYCHOLOGY

A REPORT OF THE FEBRUARY 1952 CONFERENCE OF THE APA EDUCATION AND TRAINING BOARD

WHAT role should psychology play in a liberal arts education? Should we train professional psychologists at less than the doctoral level? Should there be a core curriculum for all doctoral candidates in psychology? How can we best train psychologists for research in their different special fields? What kind of practicum training is it feasible for non-university agencies to provide? What is needed by way of postdoctoral education in psychology? How much and what kind of psychology is being taught to doctors, engineers, business students, and other professional groups—and by whom is it being taught? What are the educational implications of the rapid increase in the number of high schools which offer courses in psychology?

These and many similar questions were discussed at a recent conference of the APA Education and Training Board and Committees.¹ The conference, to which the psychologists of the University of Michigan were host, was attended by forty persons representing a great variety of educational interests and experience. The general purpose of the conference was to provide for discussion of problems on which committee members had been working throughout the year, and to make possible liaison and coordination between the different committees. It was expected, as proved to be the case, that the discussions would constitute a first step in the primary task undertaken by the E & T Board and Committees—namely, the delineation and description of the major educational issues currently facing psychology.

¹ Five committees are now working as part of the new Education and Training structure. These committees and their chairmen are as follows: Undergraduate Education, Claude E. Buxton; Subdoctoral Education, David C. McClelland; Doctoral Education, Bruce V. Moore; Practicum Training, Karl F. Heiser; Psychology in Other Professional Schools, Ruth S. Tolman. Two additional committees have been authorized but as yet have no members. They are the Committee on Postdoctoral Education and the Committee on the Teaching of Psychology in High Schools. The Chairman and the Executive Officer of the Board, Stuart W. Cook and Victor Raimy, prepared this report.

A comprehensive report dealing with these issues is in preparation and will be available for distribution later. In this preliminary statement only a few of the problems under consideration can be mentioned, and these only briefly. They are presented at this time because many of the issues will be topics for discussion at symposia and round tables at the September meetings of the APA. Those selected have been chosen in part with the objective of illustrating the range of issues to be dealt with. In making the selection equally important items have been omitted. These will be covered in the full report.

TRAINING FOR PROFESSIONAL WORK BELOW THE DOCTORAL LEVEL

Some of the most lively discussions at the conference centered around the training of technical and professional workers at subdoctoral levels. Opinions on this topic vary widely, as previous statements in this JOURNAL have indicated. Some psychologists feel there are many positions which would be most appropriately filled by persons with training below the doctoral level. Others hold that the disadvantages inherent in this practice far outweigh the advantages; they point out that the public tends to consider them as fully trained psychologists and expects them to take on responsibilities for which they are not prepared. Among those who favor training technical workers at subdoctoral levels there are many views as to the kinds of jobs for which training should be offered and the relative need, during training, for work in general psychology in contrast to specialized courses. There is disagreement, also, as to whether technical workers should be trained at the graduate or undergraduate level. Those who argue for the latter point out that the routine character of many of these positions, as well as the limited salaries and opportunities for advancement associated with them, would not in other fields be thought of as requiring graduate training.

After studying these points—and many others—the Committee on Subdoctoral Education presented

a tentative analysis of the issues as a basis for further discussion. They proposed first to categorize subdoctoral trainees in four occupational groups, as follows: (a) Those who administer and interpret psychological tests, to be called, as a group, psychological examiners. (b) Those who do guidance and counseling, largely in the educational, vocational, and industrial areas; to be called, perhaps, psychological counselors. (c) Those who specialize in such fields as remedial reading and speech correction or engage in specialized training programs in industry, and have as their common function the conducting of special-purpose educational programs, might be called psychological educators. (d) Those who work in a variety of technical capacities such as job analysis, test construction, and statistical treatment; as a group to be called, perhaps, psychological technologists.

Should these groupings prove to be meaningful, it would then become more feasible, in the Committee's view, to evaluate questions of educational policy. For example, it should become possible to determine the type of training most appropriate for each occupational group. This, in turn, should make possible a decision as to whether the training might be offered to undergraduates or whether it called for a graduate program. The Committee has offered proposals on these points; however, they are too lengthy for presentation here and must be reserved for the more detailed report.

Subsequent to the conference, the Committee arranged for discussion of these questions at each of the regional association conventions. Universities training psychologists for professional work at the subdoctoral level were each invited to send a departmental representative to participate in a group discussion of such training. Well-attended conferences took place at the Eastern, Midwestern, Rocky Mountain, and Western meetings and at the meeting of the Southern Society for Philosophy and Psychology. There was general agreement among the participants that the exchange of opinion and of information about training practices had been of value and should be repeated on this and other topics in the future. The Committee obtained a variety of reactions to its proposals; these will be helpful to it in further work on the problem.

THE UNDERGRADUATE CURRICULUM

A second problem receiving attention at the conference was the nature of the undergraduate cur-

riculum in psychology. At present considerable variation exists. At some universities, the undergraduate curriculum includes numerous courses aimed at the development of professional skills; in others, such courses are infrequent or entirely absent. Some departments organize their course offerings primarily in terms of the special fields of psychology, such as abnormal, social, industrial, and educational; others place more stress on the components of a conceptual system and build courses around such topics as motivation, perception, learning, and personality. In some places, special courses are offered for students in other fields, e.g., nursing, business, and engineering. In others, such students are enrolled in the department's regular courses.

Many psychologists, of course, would hold that this is just as it should be, that psychology has not yet developed to a point where greater similarity in course offerings is either feasible or desirable. Some believe, furthermore, that variation will always characterize undergraduate psychology as long as it continues to fulfill its proper function of selecting from psychological science that which different student groups will find most beneficial in light of their special needs. In contrast, others argue that the time has come to make a rational selection of courses and provide for an integrated progression of study in terms of the most adequate conceptual system now available.

The Committee on Undergraduate Education presented the conference participants with the arguments for giving greater stress to this latter point of view. The Committee is considering whether in the long run a basic education in psychology might contribute more to the effectiveness of the person than the acquisition of particular skills, even though the latter may appear to have immediate use-value. This might be particularly true for the student preparing for graduate study in psychology but the Committee wishes also to examine the possibility that such a program might be most appropriate for the liberal arts student and for students in other professional curricula. A further discussion of this question has been scheduled for the APA meetings in September. The Committee hopes in the future to arrange for more frequent and extensive exchange of views among those interested in undergraduate instruction. One of the media which the Committee is considering for such exchange is a

journal devoted to the problems of college teaching in psychology.

A CORE CURRICULUM FOR DOCTORAL PROGRAMS

Since the publication of the 1947 report of the Committee on Training in Clinical Psychology, there has been rather wide interest in the question of a core curriculum for the doctoral program. As is well known, the CTCF advocated a thorough grounding in the content and methods of general psychology for the clinical doctorate. Many psychologists advocate a similar approach to doctoral training in other specialized areas. It is a common view, for example, that training for industrial psychologists should stress basic methods rather than applied courses.

However, there is strong opinion to the contrary. Some of those in opposition contend that there are certain basic skills such as statistics and research design which should be included in the education of all doctoral candidates but that for the time being at least there is no such thing as an appropriate common core of psychological subject matter. Still others feel that the effort to impart a common set of research skills to all psychologists is misguided. They argue that the person who teaches or consults or practices psychology in some other way will profit more from courses tailored to his real needs.

To some extent differences of opinion on this subject mirror major differences in assumptions about the future nature of professional psychology; to some extent, however, they result from a misunderstanding of opposing viewpoints. With the objective of minimizing the latter, the Committee on Doctoral Education has prepared an analysis of the issue and a proposal for dealing with it. A certain amount of common background is suggested for all doctoral candidates while allowing increasing opportunity for specialization as the student progresses through successive phases of his training. Details of the proposal will be presented in a symposium at the September meetings. Through this symposium and later discussions of a similar nature the Committee hopes to encourage analysis and improvement of the rapidly growing doctoral programs in specialized psychological fields. The Committee is exploring various possibilities for the exchange of opinion and practice among training departments. It wishes, of course, to avoid any pressures for premature and unnecessary standardization of the doctoral curriculum.

PRACTICUM TRAINING

Another facet of graduate training in which post-war developments have aroused renewed interest is that of practicum training. Considerable thought is being directed to the question of to whom and in what form such training should be given. In clinical psychology there appears to be general agreement that on-the-job training under adequate supervision must be provided before the new PhD is allowed to work independently. This usually takes the form of one or more supervised practicum courses followed by a predoctoral internship year. Occasional training institutions have developed similar provisions for supervised experience for their students in industrial and in social psychology. While the initial tendency in these areas has been to follow the procedures established in clinical psychology, no pattern of practices has as yet crystallized.

Should the requirement of supervised on-the-job experience be extended to all doctoral candidates? Or is this unnecessary for those who plan to teach and to follow research careers in laboratory settings? Those who advocate the extension tend to feel that the present performance of newly-graduated PhD's is often inadequate and that an experience requirement would provide a needed correction. Those who oppose it feel that the length of the doctoral training period is already adequate and the addition of an extra year would create an unnecessary and unwarranted burden. To the latter, the natural and expected occasion for acquiring job experience is during the first year or two on the actual job itself.

The Committees on Practicum Training and Doctoral Education, after a joint preliminary study of current or feasible practicum procedures, suggested to the conference several approaches to future consideration of the problem. They recognized by way of historical perspective that supervised experience has for some time been a more or less informal part of doctoral education in psychology. When departments were small and most psychologists were preparing for teaching careers, the vast majority of students served as laboratory and teaching assistants, graded tests and laboratory reports, taught quiz sections, and occasionally substituted for lecturers. Thus, the current concern with providing job experience as a part of training is not a new development. We are simply faced with the need

for better methods of arranging for such experience, a need which has developed in part out of the growth in size of our student bodies and in part out of the special requirements of the more recently developed doctoral programs.

The Committees suggested that in considering the desirability of practicum work for specific training programs the basic question to ask is whether lack of experience prior to graduation is likely to be detrimental to the calibre of the student's work or to the welfare of the client or agency he serves. The application of this criterion may result in the decision to incorporate practicum training in some fields and omit it in others. Where it is incorporated the form it takes will be decided most wisely if the rôle of the practicum work is defined only in the context of the objectives of the total curriculum. With such considerations as these in mind, further study will be made during the coming year of practicum programs in selected training areas.

TEACHING PSYCHOLOGY TO OTHER PROFESSIONS

In one of our potentially most important areas of concern, the teaching of psychology in other professional schools, we still know so little about current practices that we are unable to define the significant educational issues. At the moment we know little more than that each year thousands of students in twenty to thirty professional groups are taught some kind of psychology by some type of instructor.

During the past year, the Committee on Psychology in Other Professional Schools has initiated a series of studies intended to serve eventually as factual background for its analysis of this situation. Preliminary reports of these studies were presented to the conference. They revealed a number of startling facts.

For instance, there appear to be almost 200 psychologists in this country who are teaching or working in medical schools, while schools of social work appear to employ only a few psychologists as teachers. As yet, no psychologist has been found who is currently engaged in teaching psychology to students of law, but in apparently increasing numbers psychologists are teaching engineers, nurses, students of commerce and business administration, dietitians, and public health workers.

To date there appears to have been very little communication among psychologists teaching stu-

dents of other professions, and the Committee hopes, as part of its task, to establish channels whereby experiences, problems, and solutions can be exchanged more readily.

OTHER ISSUES UNDER CONSIDERATION

While we are unable in this statement to describe additional issues a partial list of those under consideration may be of interest:

- Training for research
- Training for theory construction
- Predoctoral MA training at institutions not granting the PhD
- The teaching of psychology in smaller liberal arts colleges
- The possible need for postdoctoral educational programs
- Policies regarding standards, standardization, evaluation, and accreditation
- Recruitment and selection of graduate students

EVALUATION OF CLINICAL TRAINING PROGRAMS AND PRACTICUM AGENCIES

In addition to considering educational issues such as those discussed above, the E & T Board and Committees dealt with a number of other matters at the Ann Arbor Conference. During the first part of the conference period the Committee on Doctoral Education completed its work on this year's evaluation of doctoral training programs in clinical psychology. Its actions were approved by the E & T Board and later concurred in by the APA Board of Directors, and the list of currently approved schools was published in the May, 1952 issue of the *American Psychologist*. Policies in regard to this program of evaluation remain unchanged from last year.

The Committee on Practicum Training reported on its study of the programs of 18 agencies which provide internships for students of clinical psychology. Visits by the committee members were aimed primarily at obtaining information on the problems and operations of the clinical internship. No formal evaluations will be published although letters of appraisal were sent to the directors of each training agency in the hope that the Committee's opinions would be helpful to the agencies. As a result of the visits and of related studies still in process, the Committee on Practicum Training expects to publish a further report on the problems of practicum training in clinical psychology.

A RECOMMENDATION REGARDING THE NEW
STATEMENT ON ETHICAL STANDARDS

The following resolution of the E & T Board was approved by the APA Board of Directors at its March 1952 meeting.

It is recommended that training institutions consider the desirability of bringing the statement prepared by the Committee on Ethical Standards in Psychology, to the attention of all graduate students in psychology and of helping such students understand the various applications of the statement. (Various parts of the Committee's statement

have appeared in the following issues of the *American Psychologist*: 1950, 5, 620-626; 1951, 6, 57-64, 145-166, 428-452, 628-661.)

With the cooperation of the Committee on Ethical Standards in Psychology the E & T Board intends to make a continuing study of questions relating to education in professional ethics. Exchange of information regarding methods of education for ethical practices should be useful to those departments which wish to include such material in their graduate programs.

TECHNICAL RECOMMENDATIONS FOR PSYCHOLOGICAL TESTS AND DIAGNOSTIC TECHNIQUES: PRELIMINARY PROPOSAL¹

APA COMMITTEE ON TEST STANDARDS

DEVELOPMENT AND SCOPE OF THE RECOMMENDATIONS

PSYCHOLOGICAL and educational tests are used in arriving at decisions which may have great influence on the ultimate welfare of the persons tested. Test users therefore wish to apply high standards of professional judgment in selecting and interpreting tests, and test producers wish to produce tests which can be of the greatest possible service.

In particular, the test producer has the task of providing sufficient information about a test so that users will know what reliance can safely be placed on it. There is general agreement that test manuals and associated aids to test usage should be made complete, comprehensible, and unambiguous. Until this time, however, there has been no statement representing a consensus as to what information is most essential to the test consumer. In the absence of such a guide, it is inevitable that some tests appear with less adequate supporting

¹ This is a draft published at this time for critical examination by APA members and others concerned with tests. During the present year, the Committee will revise the recommendations and develop more specific standards applicable to tests of particular types. The revised recommendations will be submitted to the Council for adoption as an APA statement in September, 1953, according to present plan.

Criticisms and suggestions are needed, as early as possible. They will be most helpful if received before October 15, 1952. When draft material on a particular type of test (interest inventories, personality inventories, projective instruments and related clinical techniques, aptitude and ability tests) is ready, it will be sent to any member who requests that he be placed on the mailing list for that section. Inquiries, requests, and comments should be sent to the Chairman of the APA Committee on Test Standards, Lee J. Cronbach, 1007 South Wright Street, Champaign, Illinois. Other members of the Committee are E. S. Bordin, R. C. Challman, H. S. Conrad, Lloyd G. Humphreys, Paul E. Meehl, and Donald E. Super.

information than others of the same type, and that facts which some users regard as indispensable have not been reported because they seemed relatively unimportant to the test producer. The Council of Representatives of APA has asked this Committee to prepare a set of technical recommendations which may be published as an official statement of the profession. The task of the Committee has been to survey the possible types of information that test producers might make available, to weigh the importance of these, and to make recommendations regarding test preparation and publication.

Danger of Stifling Adaptation and Innovation

Improvement of psychological testing has long been a concern of the Association. In 1906, an APA committee, with Angell as chairman, was appointed to act as a general control committee on the subject of measurements. The function of that committee was quite different, however, from the present one, for that committee was concerned with the standardization of testing techniques, whereas the present committee has been concerned with standards of reporting information about tests.

In a developing field, it is necessary to make sure that standardizing efforts do not stifle growth. The words of the earlier committee are appropriate today:

The efforts of a standardizing committee are likely to be regarded with disfavor and apprehension in many quarters, on the ground that the time is not yet ripe for stereotyping either the test material or the procedure. It may be felt that what is called for, in the present immature condition of individual psychology, is rather the free invention and the appearance of as many variants as possible. Let very many tests be tried, each new investigator introducing his own modification; and then, the worthless will gradually be eliminated and the fittest will survive.

Issuing specifications for tests could discourage the development of new types of tests. In any case,

so many different sorts of tests are needed in present psychological practice that limiting the kind or the specifications would not be sound procedure. The 1906 committee, while taking cognizance of the importance of allowing trial of new ideas, was able to make a significant standardizing contribution. Standardization of test items and test administration has become a basic rule of psychological testing since their report was published. It may be noted that the wide variety of present tests is in itself proof that appropriate standardization need not interfere with innovation.

The aim of the present committee is to assist test producers to bring out a wide variety of tests that will be suitable for all the different purposes for which psychologists use tests, and to bring out those tests in the most helpful way possible.

Information Standards as a Guide to Producers and Users of Tests

The essential principle that sets the tone for this document is that a test manual should carry sufficient information that any qualified user can make sound judgments regarding the usefulness and interpretation of the test. This means that certain research is required prior to general release of a test, that the results must be reported or summarized in the manual, and the manual must help the reader to interpret these results.

A manual is to be judged not merely by its literal truthfulness, but by the impression it leaves with the reader. If the typical professional user is likely to obtain an untrue impression of the test from the manual, the manual is poorly written. Ideally, manuals would be tested in the field by comparing the typical reader's conclusions with the judgment of experts regarding the test. In the absence of such trials, our recommendations are intended to apply to the spirit and tone of the manual as well as its literal statements. It is considered that the manual is most useful if *all* the people to whom it is directed can follow both the language and the reasoning.

The setting of standards in any absolute form has been avoided, even though it would have been tempting to say, for instance, that a validity coefficient ought to reach .50 before a test of Type A is ready for use or that a test of Type B should always have a reliability of .90 before it is used for the measurement of individual subjects. There are different problems in different situations, de-

pending on whether clinical analysis or personnel selection is involved, whether preliminary or final decisions are being made, or whether decisions are a matter of great cost and importance. All these considerations convince the Committee that it is not appropriate to call for a particular level of validity and reliability, or to otherwise specify the nature of the test. It is appropriate to ask that the manual give information so that the user can decide whether the accuracy, relevance, or standardization of the test makes it worth consideration for his purposes. *These recommendations, then, suggest standards of test description and reporting without stating minimum statistical specifications.*

The aim of the present standards is partly to make the requirements as to information accompanying published tests explicit and conveniently available, and partly to recommend the presently reasonable degree of compromise between pressures of cost and time, on the one hand, and the ideal, on the other. The criteria by which a test may be judged have been discussed in many texts and theoretical papers. The relative importance of these criteria has, however, not been considered, and a test producer who reported all the information these diverse criteria suggest would be burdened by excessive costs. The manual or handbook produced would be too complex to be serviceable. Somewhat different standards should be stressed for different types of tests and not all types of information are equally crucial. In recognition of the fact that developing a test is expensive and that statistical analyses of minor importance are sometimes quite costly, the Committee has endeavored to decide what demands the consumer might reasonably make. Insofar as the Association, speaking for the people who use tests, can indicate the sort of information that would be most valuable, test authors and publishers can then direct their limited funds to gathering and reporting those data. Validation on practical or job criteria, for example, is essential before practical use of some tests can be made, but only a desirable addition in other fields, and irrelevant for still other tests. The standards therefore attempt to state what type of studies should be completed before a test is ready for release to the profession for operational use, setting a level which is reached by good present tests.

These statements have been submitted to criticism by specialists in test construction and use, in-

cluding test publishers. The Committee has consulted with committees from other organizations working on the same general problem, notably the National Council on Measurements Used in Education and the American Educational Research Association. Through successive revisions, the standards are being brought toward the form where they represent a true consensus.

Tests to Which the Standards Apply

The Committee, in defining the scope of its operations, has planned its recommendations to cover not only tests as narrowly defined, but also most published devices used in assessing psychological characteristics. The recommendations will apply to interest inventories, personality inventories, projective instruments and related clinical techniques, and tests of aptitude or ability. Achievement tests present special problems, and have been left, by agreement, to committees of other organizations.

General standards are presented that apply to all of the devices listed above. To reduce these generalizations to more explicit standards, the implications for particular types of tests will be stated in the next draft of the materials. Comments have been made to illustrate many of the points.²

Psychological tests can be arranged on a continuum as to degree of development. At the one extreme are those distributed for use in practical situations where the user is unlikely to validate the tests for himself. Such a user must assume that the test does measure what it is presumed to measure on the basis of its title and manual. For instance, if a clerical aptitude test is used in vocational guidance under the assumption that this will predict success in office jobs, there is very little possibility that the counselor could himself validate the test for the wide range of office jobs to which his clients might go.

At the other extreme of the continuum are tests in the very beginning stages of their development. At this point, perhaps the investigator is not sure his test is measuring any useful variable. Perhaps the process of interpreting is so undeveloped that the author restricts use of the test to situations

where he himself knows the persons who will use the test, can personally caution them as to its limitations, and is using the research from these trials as a way of improving the test. Between these tests, which are so to speak embryonic, and the tests which are released for practical application without local validation are tests released for somewhat restricted use. There are many tests which have been examined sufficiently to indicate that they will probably be useful tools for psychologists, but they are released with the expectation that the user will conduct validation studies against performance criteria, or will verify suggested clinical inferences by studying the subsequent behavior of persons in treatment. Examples are certain tests of spatial ability, and some of the more thoroughly developed projective techniques.

The Committee is concerned with the tests toward the operational end of the continuum. *The present standards apply to tests which are distributed for use as a basis for practical judgments rather than solely for research.* They apply with especial force to tests distributed to users who have only that information about the test which is provided in the manual and other accessories. Tests released for operational use should be prepared with the greatest care, and released only after their developer has gathered information which will permit the user to know what the test can be trusted for and what inferences have not been validated. The Committee has not prepared standards for tests which are privately distributed, and circulated only to especially trained users.

The general topics to be covered in the test standards are Interpretation, Validity, Reliability, Administration, and Scales and Norms. For each of these, general or keynote principles may be stated which apply to all tests. Different emphases are required, however, for each particular type of test.

Three Levels of Standards

Manuals can never give all the information that might be desirable, because of economic limitations. At the same time, restricting this statement to essential information might tend to discourage reporting of additional information. This we seek to avoid by proposing three levels of information. Standards are grouped in three levels: **ESSENTIAL, VERY DESIRABLE, AND DESIRABLE.** Each proposed requirement is judged in the light

² Tests mentioned in the comments have not been singled out as being particularly good or poor tests. The tests used for illustrative purposes are chosen because they are widely known, except where some less prominent test provides an unusually clear illustration of the point under discussion.

of its importance and the practicality of its attainment.

The ESSENTIAL standards are intended to be the consensus of present-day psychology as to what is normally required for operational use of a test. Any test presents some unique problems, and it is undesirable that standards should bind the producer of a novel test to an inappropriate procedure or form of reporting. The ESSENTIAL standards indicate what information will be genuinely needed in most instances, and when a test producer does not satisfy this need he should do so only as a considered judgment. In any single test, there will probably be very few ESSENTIAL standards which do not apply.

The category VERY DESIRABLE is used to draw attention to types of information which contribute greatly to the user's understanding of the test. They have not been listed as essential for such reasons as the following. Some types of information are difficult or costly to acquire and because of this cannot always be expected to accompany the test. At times a closely reasoned minority opinion regards a type of information as unimportant. Such information is still very desirable, since many users wish it; but unless it is easily provided, it is not classed as essential so long as its usefulness is debated.

The DESIRABLE standards refer to information which would be helpful, but less so than the ESSENTIAL and VERY DESIRABLE information. Test users welcome any information of this type the producer offers. In making such facts available the producer is performing an additional service, beyond the level that can reasonably be anticipated for most tests at this time.

The Audience for These Recommendations

The Committee has aimed to produce standards which will be useful to all those people who might be concerned with test production or with the purchase and interpretation of tests, and who have sufficient professional training to understand technical recommendations. This statement of standards cannot be a substitute for psychological training; we have addressed them to people who have had at least one substantial course in tests and measurements. The standards should contribute to the professional understanding of such test users.

The professional worker whose training is not recent will be interested in the thinking and sta-

tistical criteria which are presently being applied in test evaluation. A person who is concerned with tests in a field in which he has had limited training will be interested in knowing what he can reasonably demand of a test manual in that field. These recommendations should serve as reminders regarding crucial points to people purchasing tests. They may be useful to those who write reviews by pointing out what would be especially significant to examine. Test authors should refer to them in deciding what studies to perform on their tests and how to report them in their manuals. Test publishers will be able to use them in planning revision of their present tests. In considering proposed manuals, publishers can suggest to authors the types of information which need to be gathered in order to make the manual as serviceable as it should be.

Revision and Extension

For many reasons, it will be necessary to revise the standards periodically, and the Committee recommends that definite machinery for assuring such revision be provided. Despite the care with which the standards have been developed, experience will no doubt reveal that some of our judgments would benefit from further examination. The emergence of new tests will present problems not considered in the present work, and the improvement of statistical techniques and psychometric theory will yield better bases for test analysis. The efforts of test producers will lead to continued improvement in tests, and as this continues it will be possible to raise the standards so that the test user has ever better information about his tools.

Preparation of standards for test information by no means completes the job of improving tests and test use. There are many possibilities of improving testing practices through, for example, better education of those who use tests, or better administrative practices which will ensure that tests are used only by those who are competent to interpret them in a sophisticated manner. The Committee on Test Standards has regarded these problems as outside its mission. The Association should continually take steps to better these other aspects of psychological testing.

The Question of "Enforcement"

Once the recommendations are accepted, the Association will need to consider how they will be used and whether any formal enforcement machinery is

called for. The Council of Representatives, at the time that the Committee on Test Standards was set up, was unfavorable to a proposal that a "Bureau of Test Standards" be planned. The Committee was directed to prepare the standards without making supplementary plans for an enforcing body.

The standards here presented are intended to be used by individual psychologists and by test publishers without reference to any enforcement machinery. The principal function of these standards is to record the judgment of a professional group. The statement will then be used by individual members of the profession to improve their own work.

GENERAL STANDARDS

A. Interpretation

In interpreting tests, the user always is responsible for making inferences as to the meaning of scores. In making such judgments, he is dependent upon the available data about the test. It is necessary to make inferences from certain tests and for certain purposes which have not been completely substantiated by the published evidence. The vocational counselor cannot expect to have regression equations available for all of the predictions he must make from test scores. The clinician who uses projective techniques must often base his interpretations in part on general data and theory, in the absence of complete research on any one technique. The degree to which a test manual can be expected to prepare the user for accurate interpretation of the test varies with the type of test and the purpose for which it is used.

In general, manuals of ability and aptitude tests can be expected to present sufficient information for sound interpretation of test scores by properly trained users. At the other extreme, users of a projective instrument should not make interpretations without specific supervised training with that device and instruction in the clinical concepts and data which are part of its background. Here the manual cannot alone prepare the user to make interpretations of the specific instrument.

A second responsibility, which the interpreter is more likely to overlook, arises from the examinee's reactions to interpretations of his test scores. This responsibility does not arise in all cases. Many users of tests do not give direct information to the examinee, but rather make decisions about him;

e.g., regarding admission to school, hiring, etc. Many educational and clinical uses of tests do, however, require reporting the interpretations to the person tested. The responsibility of the test user to the examinee varies from that of the teacher who interprets the results of academic achievement tests to the great responsibility assumed by the clinician in making interpretations which bear upon the client's areas of conflict. To guard against damage to the client when the tester takes this responsibility, standards are especially needed regarding proposed "self-interpreting" tests, profile forms which are likely to be misinterpreted, and the like.

A 1. When a test is published for operational use, it should be accompanied by a manual which gives the information listed as essential in these standards. The manual should be called to the attention of all purchasers of the test. Where the information is too extensive to be fully reported in such a manual, the manual should summarize the essential information and indicate where further detail may be found: ESSENTIAL

A 1.1. If, in addition to the information in the manual, more complete information is provided in a separate publication, any such publication should meet the same standards of accuracy and interpretability as apply to the manual. **ESSENTIAL**

[Comment: Each package of Kuhlmann-Anderson tests contains a manual of information which gives summarized information on validity, scales and norms, etc. The full technical account of these investigations is provided in a separately sold handbook to which the manual refers. The Stanford-Binet solves this problem differently, including the essential information in a book which all users must have. The Strong Vocational Interest Blank has been the subject of unusually thorough research which is reported in a technical book. Strong presents a brief version of the essential conclusions in a manual sold with the Blanks. In contrast, projective tests have frequently been marketed with little or no accompanying official information. It would be better if all such materials were accompanied by the producer's statement regarding the character of the materials and the extent to which they have been validated, together with references to more comprehensive reports on the tool.]

A 1.2. When new information emerges, from investigations by the test author or others, which

indicates that some facts and recommendations made in the manual are substantially incorrect, a revised manual should be issued. **ESSENTIAL**

[Comment: A revised manual for Army Beta, which arose out of World War I, was issued in 1946. In contrast, the Bernreuter Personality Inventory has been severely criticized, but no revision has been made of the manual subsequently.]

A 2. *The test manual should state explicitly the purposes and applications for which the test is recommended.* **ESSENTIAL**

A 2.1. If a test is intended for research use only, and is not distributed for operational use, that fact should be prominently stated in the accompanying materials. **ESSENTIAL**

[Comment: Thurstone plans to release factorial tests for the use of investigators conducting research on abilities. These tests are not to be used for guidance or selection until more is known about them. In such circumstances, it would be appropriate to print "distributed for research use only" on the test package or cover of the booklet of directions.]

A 3. *The test manual should indicate clearly the professional qualifications required to administer and interpret the test properly.* **ESSENTIAL**

[Comment: The APA Code of Standards for Test Distribution discusses the problem of qualifications of test users. Those standards outline three categories for classifying tests, as follows:

Tests and diagnostic aids should be released only to persons who can demonstrate that they have the knowledge and skill necessary for their effective use and interpretation.

Level A. Tests or aids which can adequately be administered, scored, and interpreted with the aid of the manual and a general orientation to the kind of organization in which one is working.

Level B. Tests or aids which require some technical knowledge of test construction and use, and of supporting psychological and educational subjects such as statistics, individual differences, and psychology of adjustment, personnel psychology, and guidance.

Level C. Tests and aids which require substantial understanding of testing and supporting psychological subjects, together with supervised experience in the use of these devices.³

A 3.1. The manual should state the classification of the test in terms of the level of training required. Where a test is recommended for a variety of purposes or types of inference, the manual should indicate the amount of training required for each use. **ESSENTIAL**

³ *American Psychologist*, November, 1950.

A 3.11. The manual should state the type and extent of any special training required for the test, possibly in terms of specified courses, or number of tests given and scored under supervision. **ESSENTIAL**

A 3.2. The manual should not imply that the test is "self-interpreting" or that it may be interpreted, except under professional supervision, by a person lacking proper training. **ESSENTIAL**

A 3.3. The manual should draw attention to references dealing with the test in question with which the user should become familiar before attempting to interpret the test. The statement should avoid the implication that this constitutes the only training needed, if other training is required. **VERY DESIRABLE**

A 4. *The test and accompanying record forms should be so designed that professional and lay persons who see the results will be helped to make correct interpretations of the scores presented.* **ESSENTIAL**

A 4.1. Where a certain misinterpretation of a given test is known to be frequently made, or can reasonably be anticipated in the case of a new test, the manual should draw attention to this error and warn against it. **ESSENTIAL**

A 4.11. Such warning should also be incorporated into any test report form to be placed in the hands of the person tested. **VERY DESIRABLE**

[Comment: The Lee-Thorpe Occupational Interest Inventory cautions the user that this is not a measure of ability or aptitude.]

A 4.2. Names given to tests, and to scores within tests, should be chosen to minimize the risk of misinterpretation by test purchasers. **ESSENTIAL**

[Comment: The House-Tree-Person Test, The Blacky Test, and the Draw-A-Person Test are examples of test names based on the content or process involved in the test which carry no unwarranted suggestions as to characteristics measured. The name "Culture-Free Intelligence Test" is likely to suggest interpretations going beyond the demonstrable meaning of test scores.]

A 4.3. In presenting the technical research on a test, the use of "value" terms and of general statements unsupported by data should be avoided. **ESSENTIAL**

A 4.4. When the term "significant" is employed, the manual should make clear whether statistical or practical significance is meant, and the practical

significance of "statistically significant" differences should be discussed. **ESSENTIAL**

A 4.5. The manual should clearly differentiate between an interpretation justified regarding a group taken as a whole, and the application of such an interpretation to each individual within the group. **VERY DESIRABLE**

[Comment: For example, if the standard error of measurement is five points, this statement should not be presented so as to imply that the obtained score for any one individual is within five points of his true score. This error might, in single cases, be very much larger.]

A 5. *When a test is issued in revised form, the nature and extent of any revision, and the overlap between the revised and the old test should be explicitly stated.* **ESSENTIAL**

A 6. *The manual should draw the user's attention to data other than the test scores which need to be taken into account in interpreting the test.* **VERY DESIRABLE**

A 6.1. The manual should report correlations of this test with other measures likely to be used in making decisions about the person tested. **DESIRABLE**

A 6.2. When case studies are used as illustrations for the interpretations of test scores, the examples presented should include some relatively complicated cases whose interpretation is not clear-cut. **VERY DESIRABLE**

[Comment: The manual for the Differential Aptitude Tests presents a small set of profiles and gives an interpretation and a too brief case summary for each one. The more extensive case reports in *Counseling from Profiles*, a supplementary booklet on the test, avoid oversimplification and emphasize the possible influence of non-test data on test interpretation.]

B. Validity

B 1. *The manual should report the validity of each type of inference for which a test is recommended. If validity of some recommendation has not been established, that fact should be made clear.* **ESSENTIAL**

B 1.1. The manual should indicate which, if any, of the interpretations usually attempted for tests such as the one under discussion have not been substantiated. **ESSENTIAL**

[Comment: An example of a highly desirable

warning to readers is this statement from the manual of the Purdue Pegboard.

Generalizations concerning the validity of any test should be made with great caution, and this is particularly true of dexterity tests. As Seashore has reported, motor skills are quite specific and ordinarily not highly correlated with each other. This situation perhaps accounts for the fact that a given dexterity test may have a rather satisfactory validity for certain manipulative jobs and yet be unsuitable for other manipulative jobs which might seem to be very similar. It is therefore highly desirable to conduct a study of the validity of the several Pegboard tests among employees on specific jobs for which the use of the test is contemplated, rather than attempt to generalize from available validity studies.]

B 1.2. As competent studies of the validity of the test are reported by investigators independent of the test author, such evidence should be taken into account fairly in the discussion of validity in subsequent editions of the manual or in supplementary reports. **ESSENTIAL**

[Comment: For example, a fair and comprehensive summary is provided in the 1951 manual for the Kuder Preference Record.]

B 1.21. Where the evidence on validity is too extensive to be placed in the manual, a supplementary report should provide a critical review of the entire literature on the test. **DESIRABLE**

B 2. *When validity is reported, the manual should indicate clearly what type of validity is referred to. The unqualified term "validity" should be avoided unless its meaning is clear from the context.* **ESSENTIAL**

Validity is not an absolute characteristic of a test. There are several types of validity depending on the type of inference for which the test is to be used. In the following standards four categories of validities have been distinguished; namely, predictive validity, status validity, content validity, and congruent validity.

Predictive validity denotes correlation between the test and subsequent criterion measures. This type of validity is necessary in vocational interest tests designed to predict later occupational satisfaction, in aptitude tests used in industrial selection, or in projective instruments used to predict reaction to therapy.

Status validity denotes correlation between the test and concurrent external criteria. The difference between this type of validity and predictive validity is solely the time factor. Predictive validity has a future reference, while status validity

refers to the individual as of the time of testing. It is important to make this distinction because predictive validity does not insure that the test will also have status validity, or vice versa. A test which reflects intellectual impairment due to psychosis (status validity) will not necessarily provide a basis for predicting future psychoses in non-patients. Similarly, an interest test which discriminates between accountants and engineers (status validity) will not necessarily predict which students will become satisfied engineers or accountants.

Content validity refers to the case in which the specific type of behavior called for in the test is the goal of training or some similar activity. Ordinarily, the test will sample from a universe of possible behaviors. An academic achievement test is most often examined for content validity.

Congruent validity is established when the investigator demonstrates what psychological attribute a test measures by showing correspondence between scores on the test, and other indicators of the state or attribute. This type of validation is used for tests intended to measure a construct arising from some theory; the validation consists of evidence that the scores vary from person to person or occasion to occasion as the theory would imply. For example, should a test aim to measure levels of psychosexual fixation, no criterion is available which is a trustworthy measure of this quality. The investigation of the test can only show that the scores perform as expected in a measure of this attribute. A much simpler type of validation which also falls under the heading of congruent validity is the demonstration that a particular test of number ability has substantial correlation with other tests accepted as measuring numerical factors. Essentially, in congruent validity the meaning assigned to test scores is substantiated by demonstrating that scores are consistent with deductions from the theory from which the meaning derived. This validation process is much the same as that involved in evaluating a theory itself.

Often congruent validity is established by considering together many different sorts of incomplete evidence. Congruent validity may rely on correlation with other tests, on observations of persons having known scores, and on evidence that the test discriminates between groups (as in status validity). Even fairly low correlations or imperfect discrimi-

nation may lend support to the interpretations made. Of most importance, however, is a direct experimental attack. Controlled investigations can test the deduction from theory. If it is supposed that form perception on the Rorschach has a predictable relationship to behavior under stress, an experimental situation can test this expectation. The various "nature-nurture" investigations studying the extent to which mental test scores can be attributed to genetic factors can be considered as studies of the congruent validity of those tests.

These distinctions may be clarified if we note that in predictive and status validity, the criterion behavior is of direct concern to the tester, and the test is of interest only as an indirect estimate of it. In tests where content validity is examined, the test behavior is the thing with which the tester is chiefly concerned. Proficiency, as shown on a work-sample performance test, can be an end in itself. Congruent validity is ordinarily studied when we have several indirect measures of some quality or trait, and wish to show that the test measures this quality. None of the test measures may be a good criterion measure of the quality which concerns the tester, yet all the measures support each other. Here the trait or quality is of central importance, rather than the test behavior per se or the criterion used.

[Comment: In accord with B 2, the manual should make clear what type of inference the validation study supports. No manual should report that "this test is valid." In the past, evidence that is not appropriately termed evidence of validity has been presented in the manual under that heading. For example, the "validity" report of the Thurstone Interest Schedule deals solely with item-test inter-correlations.]

In the following section, the recommendations for reporting statistical studies of validity apply to predictive validity, status validity, and congruent validity. Few standards have been stated for content validity, as this concept applies with greatest force to achievement tests.

B 3. When validity is verified by statistical analysis, the analysis should be reported in a form which indicates the accuracy of inferences regarding individuals. ESSENTIAL

B 3.1. Statistical procedures which are well known and readily interpreted should be used in reporting validity whenever they are appropriate to the data under examination. Any uncommon sta-

tistical techniques should be explained. **ESSENTIAL**

B 3.11. Reports of statistical validation studies should ordinarily be expressed by (a) correlation coefficients of familiar types; (b) description of the efficiency with which the test separates groups, indicating amount of misclassification or overlapping; or (c) expectancy tables indicating the probability of attaining some particular level on the criterion. **ESSENTIAL**

[Comment: Reports of differences between means of groups, or critical ratios, are by themselves inadequate information regarding predictive validity of a test even though this evidence may be important in the early stages of development of a test. If a sample is large, high critical ratios may be found even when classification of any individual is very inaccurate. In general, since manuals are directed to readers who have limited statistical knowledge, every effort should be made to communicate validity information clearly.]

B 3.2. An over-all validity coefficient should be supplemented with evidence as to the validity of the test at different points along the range, unless the author reports that the validity is essentially constant throughout. **VERY DESIRABLE**

[Comment: This might be reported by giving the standard error of estimate at various test score levels, or by indicating the proportion of hits, misses, and false positives at various cutting scores. The Metropolitan Reading Readiness Test reports the number of failures in primary reading expected at each level of test score.]

B 4. *The author should base validation studies on samples comparable, in terms of selection of cases and conditions of testing, to the groups to whom the manual recommends that the test be applied.* **ESSENTIAL**

B 4.1. The validation sample should be described sufficiently for the user to know whether his case is like those on whom the validation was based. The user should be warned against assuming validity when the test is applied to persons unlike the validation sample. **ESSENTIAL**

B 4.2. Appropriate measures of central tendency and variability of test scores for the validation sample should be reported. **ESSENTIAL**

B 4.3. The number of cases in the validation sample should be reported. The group should be described in terms of those variables known to be related to the quality tested: these will normally

include age, sex, socioeconomic status, and level of education. Any selective factor which restricts or enlarges the variability of the sample should be indicated. **ESSENTIAL**

[Comment: In tests validated on patients, the diagnoses of the patients would usually be important to report. In tests for industrial use or vocational guidance, occupation and experience should be described.]

B 4.4. Coefficients or other measures of discrimination should not be based on cases having extreme scores on the criterion, or other such unusual groups, unless the test is ordinarily to be used to distinguish between such groups. If the coefficient is based on unusual groups, it should be corrected to the value expected in typical groups of subjects. **ESSENTIAL**

[Comment: A biserial correlation between a scholastic aptitude test and college success, where the persons distinguished are dropouts and honor students, will be much higher than a coefficient based on all entering students. The test will normally be used on the latter group, and the validity coefficient should emphasize the power of the test in that group.]

B 5. *All measures of criteria should be described accurately and in detail. The manual should discuss the adequacy of the criterion. It should draw attention to significant aspects of performance which the criterion measure does not reflect and to the irrelevant factors which it may reflect.* **ESSENTIAL**

B 5.1. The reliability of the criterion should be reported if it can be determined. If such evidence is not available, the author should discuss the probable reliability as judged from indirect evidence. **VERY DESIRABLE**

B 5.2. If validity coefficients are corrected for unreliability of the criterion, both corrected and uncorrected coefficients should be reported and interpreted. **ESSENTIAL**

B 5.3. Test manuals should not report validity coefficients corrected for unreliability of the test. If for special purposes such coefficients are reported, the uncorrected coefficients must be reported also and the proper interpretation of the corrected coefficients must be discussed. **ESSENTIAL**

B 5.4. The date when validation data were gathered should be reported. **ESSENTIAL**

B 5.5. The criterion score of a person should be experimentally independent of his test score. The manual should describe precautions taken to avoid contamination of the criterion. **ESSENTIAL**

Predictive Validity

B 6. *When items are selected or a scoring key is established empirically on the basis of evidence gathered on a particular sample, the manual should not report validities computed on this sample, or on a group which includes any of this sample. The reported validity coefficients should be based on a cross-validation sample. ESSENTIAL*

B 6.1. If the manual recommends certain regression weights, validity of the composite should be determined on a cross-validation sample. **VERY DESIRABLE**

B 7. *If the criterion, the conditions of work, the type of person likely to be tested, or the meaning of the test items is suspected of changing materially with the passage of time, the validity of the test should be rechecked periodically and the results reported in subsequent editions of the manual. VERY DESIRABLE*

Status Validity

B 8. *Reports of status validity should be so described that the reader will not regard them as direct evidence of predictive validity. ESSENTIAL*

[Comment: The Minnesota Teacher Attitude Inventory is validated at present by correlating attitude scores with teaching performance at the same time. This is reported under the general heading of "validity," and use of the test for selecting teachers or teacher-training candidates is recommended. The manual should point out that there have so far been no studies measuring entering students and observing them later on the job.]

Congruent Validity

B 9. *The manual should report information to assist the user in determining what psychological attributes account for variance in test scores. DESIRABLE*

B 9.1. Insofar as practicable, the manual should report correlations between the test and other tests which are better understood. **VERY DESIRABLE**

[Comment: It is desirable to know the correlation of an "art aptitude" test for college freshmen with measures of general or verbal ability, and also with measures of skill in drawing. The interpretation of test scores would differ, depending on whether these correlations are high or low. On the other hand, it is clearly impractical to ask that the test author correlate his test with all prominent tests.]

tation of test scores would differ, depending on whether these correlations are high or low. On the other hand, it is clearly impractical to ask that the test author correlate his test with all prominent tests.]

B 9.2. The manual should report the correlations of the test with other previously published and generally accepted measures of the same attributes. **VERY DESIRABLE**

[Comment: When a test is advanced as a measure of "general intelligence," its correlation with one or more of the well-accepted measures should be reported. Similarly if a test is advanced as a measure of "mechanical comprehension" or "introversion," its correlations with other measures of these traits should be reported. The user can infer, from the size of such correlations, whether generalizations established on the older test can be expected to hold for the new one. Practical limitations will prevent most authors from correlating their test with all competing tests. Example of good practice: Wechsler reported the correlation of Wechsler-Bellevue scores with the Stanford-Binet.]

B 9.3. If a test has been included in factorial studies which indicate the proportion of the test variance attributable to widely known reference factors, such information should be presented in the manual. **DESIRABLE**

B 10. *When a test consists of separately scored parts or sections, the correlation between the parts or sections should be reported. ESSENTIAL*

B 10.1. If the manual reports the correlation between a subtest and a total score, it should point out that part of this correlation is an artifact. **ESSENTIAL**

B 11. *Where congruent validity is established by inference from scattered experiments, correlations with other tests, and other indirect evidence, the manual should indicate clearly what degree of confidence can be placed in the interpretation suggested for scores. ESSENTIAL*

[Comment: Even in the case of well-known and carefully studied tests, establishing "what the test measures" is difficult. An intelligence test manual could at most point to the evidence establishing a presumption that differences are attributable in part to innate abilities. A test purporting to measure an attitude or a personality trait will generally be validated only incompletely at best, and the manual should not encourage excessive confidence in the author's interpretation.]

Content Validity

B 12. Claims or recommendations based on content validity should be carefully distinguished from inferences established by statistical studies. ESSENTIAL

[Comment: While content validity may establish that a test taps a particular area, it does not establish that the test is useful for some practical purpose, such as predicting grades or occupational interests. The "content validity" of the Lee-Thorpe Occupational Interest Inventory rests upon the method of sampling items from the Dictionary of Occupational Titles. This alone does not establish that the test validly predicts job interests.]

B 13. If content validity is important for a particular test, the manual should indicate clearly what universe of content is represented. ESSENTIAL

B 13.1. The universe of content should be defined in terms of the sources from which items were drawn, or the content criteria used to include and exclude items. ESSENTIAL

B 13.2. The method of sampling items within the universe should be described. ESSENTIAL

[Comment: R. H. Seashore prepared a vocabulary test, defining his universe as all words in a certain unabridged dictionary, and sampled according to a definite plan. Reports on the Wechsler Memory scale do not make clear what universe of content is represented nor how items were selected.]

C. Reliability

Reliability is a generic term referring to many types of evidence. The several types of reliability coefficient do not answer the same questions and should be carefully distinguished. We shall refer to a measure based on internal analysis of data obtained on a single trial of a test as a *coefficient of internal consistency*. The most prominent of these are the analysis of variance method (Kuder-Richardson, Hoyt) and the split-half method. A coefficient based on scores from two forms given at essentially the same time we shall refer to as a *coefficient of equivalence*. (A split-half coefficient based on carefully equated parts of a test is in effect a coefficient of equivalence.) The correlation between test and retest, with an intervening period of time, gives a *coefficient of stability*. Such a coefficient is also obtained when two forms of the test are given with an intervening period of time.

C 1. The test manual should report such evidence of reliability as would permit the reader to judge whether scores are sufficiently dependable for the recommended uses of the test. ESSENTIAL

C 1.1. Evidence is required for every score, sub-score, or combination of scores whose interpretation is suggested. ESSENTIAL

C 1.2. If differences between scores are to be interpreted or if the plotting of a profile is suggested, the manual should report the reliability of the difference between any two scores for the same person. ESSENTIAL

C 1.21. If reliability of differences between scores is low, the manual should caution the user against plotting profiles or interpreting differences in scores except as a source of preliminary information to be verified. ESSENTIAL

[Comment: The California Test of Mental Maturity reports reliability coefficients for the main scores and for scores on the major sections. Each section is further divided, the Spatial subtest, for example, including a group of items on Manipulation of Areas. By listing scores for such subsections on the profile sheet, the authors indirectly encourage interpretation of them. While supplementary material on the test mentions the low reliability of the subsections, the manual does not. It would be sounder practice to plot only those scores whose reliability is determined and reported in the manual. In some suggestions for interpretation, this test manual implies that certain meanings can be given to the difference between Language and Non-Language scores. The reliability of this difference should therefore be discussed.]

C 1.3. Reliability coefficients of various types should be reported even when tests are recommended solely for empirical prediction of criteria. DESIRABLE

[Comment: The E.R.C. Stenographic Aptitude Test reports validity coefficients without also giving an estimate of reliability. For certain judgments, such as the potential effect of lengthening the test, information about reliability is required and should be available to the user.]

C 1.4. The manual should report whether the standard error of measurement varies at different score levels. If there is significant change in the error of measurement from level to level, this fact should be properly interpreted. VERY DESIRABLE

[Comment: Terman and Merrill point out that differences in IQ from Form L to Form M of the Stanford-Binet Scale are much larger for IQ's above 100 than for low IQ's.]

C 2. *The manual should avoid any implication that reliability measures demonstrate validity of the test as a predictor of other variables.* **ESSENTIAL**

C 3. *In reports of reliability, procedures and sample should be described sufficiently for the reader to judge whether the evidence applies to the individual or group with which he is concerned.* **ESSENTIAL**

C 3.1. Evidence of reliability should be obtained under conditions like those in which the author recommends that the test be used. **VERY DESIRABLE**

[Comment: The maturity of the group, the variation in the group, and the attitude of the group toward the test should represent normal conditions of test use. For example, the reliability of a test to be used in selecting employees should be determined by testing applicants for positions rather than by testing college students, or workers already employed.]

C 3.2. The sample should be described in terms of any selective factors related to the variable being measured, usually including age, sex, and educational level. Number of cases of each type should be reported. **ESSENTIAL**

C 3.3. Appropriate measures of central tendency and variability of the test scores of the sample should be reported. **ESSENTIAL**

C 3.31. Reliability coefficients corrected for restriction of range may be reported. The manual should also report the uncorrected coefficient, together with the standard deviation of the group tested and the standard deviation assumed for the corrected sample. In discussing such coefficients, emphasis should be placed on the one which refers to the degree of variation within which discrimination is normally required. **ESSENTIAL**

C 3.4. Where the sample can be divided into subclasses which differ in their scores on the test, and when the test is ordinarily required to make discriminations within such a subclass, a reliability coefficient should be reported for each subclass. **VERY DESIRABLE**

[Comment: The Mechanical Reasoning section of the Differential Aptitude tests has different reliability for boys and girls. For this and other

sections, the manual gives reliability for each sex and grade.]

C 3.5. *Where two trials of a test are correlated, the time between testings should be stated.* **ESSENTIAL**

Equivalence of Forms

C 4. *If two forms of a test are made available, with both forms intended for possible use with the same subjects, the correlation between forms and information as to the equivalence of scores on the two forms should be reported.* **ESSENTIAL**

C 4.1. Where the content of the test items can be described meaningfully, a comparative analysis of the forms is desirable to show how similar they are. **DESIRABLE**

Internal Consistency

C 5. *A coefficient of internal consistency should be reported if the manual suggests that a score is a measure of a generalized, homogeneous trait.* **ESSENTIAL**

C 6. *Coefficients of internal consistency should be determined by the split-half method or methods of the Kuder-Richardson type, if these can properly be used on the data under examination. Any other measure of internal consistency which the author wishes to report in addition should be carefully explained.* **ESSENTIAL**

[Comment: There will no doubt be unusual circumstances where special coefficients give added information. There are grave dangers of giving unwarranted impressions, however, as is illustrated in the case of the Brainard Occupational Preference Inventory. This test yields a set of scores which are interpreted as a profile. The manual reports no information on the reliability of these scores, but does report a "total reliability" based on a formula by Ghiselli. This reliability seems not to correspond to any score actually interpreted, and what it indicates about the value of this particular test is unclear without more discussion than the manual provides.]

C 6.1. Split-half or Kuder-Richardson coefficients for time-limit tests should never be reported unless (a) the manual also reports evidence that speed of work has negligible influence on scores, or (b) the coefficient is based on the correlation between parts administered under separate time limits. **ESSENTIAL**

[Comment: Evidence of accuracy of measurement for highly speeded tests is properly obtained by retesting or testing with independent equivalent forms.]

C 6.11. If better evidence is not available, lower-bounds formulas designed for estimating the internal consistency of speeded tests may be used to determine the minimum coefficient. DESIRABLE

C 6.2. If several questions within a test are experimentally linked so that the reaction to one question influences the reaction to another, the entire group should be treated as an "item" in applying the split-half or analysis-of-variance methods. ESSENTIAL

[Comment: In a reading test, several questions about the same paragraph are experimentally dependent. All of these questions should be placed in the same half-test in using the split-half method. In the Kuder-Richardson method, the score on the group of questions should be treated as an "item" score.]

C 6.3. If a test can be divided into sets of items of different content, internal consistency should be determined by procedures designed for such tests. VERY DESIRABLE

[Comment: One such procedure is the division of the test into "parallel" half-tests; another is to apply the Jackson-Ferguson "battery reliability" formula.]

C 6.4. The manual should not imply that a result by an analysis-of-variance (e.g., Kuder-Richardson) formula is "conservative," or that the actual reliability is greater than the coefficient obtained. ESSENTIAL

[Comment: Statements of this character are frequently correct, but are inadvisable because they are subject to serious misinterpretation.]

Stability

C 7. *The manual should indicate what degree of stability of scores may be expected if a test is repeated at various later times. If such evidence is not presented, the absence of information regarding stability should be noted.* ESSENTIAL

[Comment: Stability should be high for some tests. Other tests which seek to measure transient characteristics are ineffective if their stability is too high. For vocational guidance, an interest measure should be stable, but for planning short-range curricular experiences, stability is not necessary.]

C 7.1. Stability should be determined by administering the test at different times. The manual should report changes in mean score and correlation between the two sets of scores. ESSENTIAL

C 7.11. In determining stability of scores by repeated testing, other precautions such as giving alternate forms of the test should be used to minimize recall of specific answers. VERY DESIRABLE

D. Administration and Scoring

D 1. *The directions for administration should be presented with sufficient clarity that the test user can duplicate the administrative conditions under which the norms and validity data were obtained.* ESSENTIAL

D 1.1. The published directions should be complete enough so that people tested will understand the task in the way the author intended. VERY DESIRABLE

[Comment: For some tests it is desired to make completely clear whether the person should guess when uncertain, whether he should strive for speed or accuracy, etc. In other tests, notably projective techniques, it is intended that the subject make certain interpretations in his own way. In either case, the directions should be designed to standardize whatever aspects of performance are not intended to vary from subject to subject.]

D 2. *Where subjective processes enter into the scoring of the test, evidence on degree of agreement between two independent scorings should be presented. If such evidence is not provided, the manual should draw attention to scorer error as a possible source of error of measurement.* ESSENTIAL

D 2.1. In studies of scorer agreement, the bases for scoring and the procedure for training the scorers should be described in sufficient detail to permit other scorers to reach the degree of agreement reported by the manual. VERY DESIRABLE

E. Scales and Norms

E 1. *Scales used for reporting scores should be such as to increase the likelihood of accurate interpretation and emphasis by test interpreter and subject.* ESSENTIAL

[Comment: Scales in which test scores are reported are extremely varied. Raw scores are used.

Relative scores are used. Scales purporting to represent equal intervals with respect to some external dimension (such as age) are used. And so on. It is unwise to discourage the development of new scaling methods by insisting on one form of reporting. On the other hand, many different systems are now used which have no logical advantage, one over the other. Our proposal that the number of systems now used be reduced to a few with which testers can become familiar is not intended to discourage the use of unique scales for special problems. Suggestions as to preferable scales for general reporting are not intended to restrict use of other scales in research studies.]

E 1.1. Test norms should be expressed in terms of the same scale as the scores reported to the test interpreter and client. **ESSENTIAL**

E 2. Where there is no compelling advantage to suggest reporting scores in some other form, the manual should suggest reporting scores in terms of percentile equivalents or standard scores. VERY DESIRABLE

[Comment: Professional opinion is divided on the question whether mental test scores should be reported in terms of some theoretical growth scale, such as the intelligence quotient or the Heinis index. Thus, an investigator who has a rationale for such scales as these should use them if he regards them as especially adequate. On the other hand, there is no theoretical justification for scoring mental tests in terms of an "IQ" which is not derived in terms of the theory underlying the Binet IQ and which has different statistical properties than the IQ does. Standard or percentile scores would be preferable to arbitrarily defined IQ scales such as are used in the Otis Gamma and Wechsler-Bellevue tests.]

E 2.1. Standard scores obtained by transforming scores so that they have a normal distribution and a fixed mean and standard deviation are preferable, unless there is a substantial reason to choose some other type of derived score. **VERY DESIRABLE**

E 2.11. If a two-digit standard score system is used, the mean of that system should be 50 and the standard deviation 10. **DESIRABLE**

E 2.12. If a one-digit standard score system is used, the mean of the system should be 5 and the standard deviation 2 (as in stanines). **DESIRABLE**

[Comment: The foregoing are proposed as ways of standardizing practice among test developers. It

is expected that institutions with established systems, such as the 400-point College Board scale, will retain them as suited to their purposes.]

E 2.3. Where percentile scores are to be plotted on a profile sheet, the profile sheet should be based on the normal probability scale. **VERY DESIRABLE**

E 3. Except where the primary use of a test is to compare individuals with their own local group, norms should be published at the time of release of the test for operational use. ESSENTIAL

E 3.1. Even though a test is used primarily with local norms, the manual should aid the user who lacks local norms to compare an individual's performance to the expected performance of members of some appropriate reference group. **DESIRABLE**

E 4. Norms should report the distribution of scores in an appropriate reference group or groups. ESSENTIAL

E 4.1. In addition, standards showing what expectation a person with a given test score has of attaining some criterion score should be given where possible. Conversion tables translating test scores into proficiency levels should be given when proficiency can be described on a meaningful absolute scale. **DESIRABLE**

[Comment: Such expectancy norms might indicate probability of attaining a certain typing speed, or a level of reading comprehension specified in terms of illustrative paragraphs.]

E 5. Norms should be based on defined and clearly described populations. These populations should be the groups to whom users of the test will ordinarily wish to compare the persons tested. ESSENTIAL

E 5.1. The manual should report the method of sampling within the population, and should discuss any probable bias within the sample. **ESSENTIAL**

E 5.11. Norms based on a planned sample of the population are always preferable to a sample selected primarily on the basis of availability, and should be used wherever possible. **VERY DESIRABLE**

[Comment: Occupational and educational test norms have often been based on scattered groups of test papers, and authors sometimes request that users mail in results for use in subsequent reports of norms. Distributions so obtained contain unknown bias and have little value.]

E 5.2. The manual should report whether scores differ for groups differing on age, sex, amount of training, and other equally important variables. **ESSENTIAL**

E 5.21. If such differences exist, and if an interpretation based on norms for the person's own group leads to substantially different recommendations and treatment than an interpretation based on the general norms, then separate norm tables should be provided in the manual for each group. **ESSENTIAL**

[Comment: An example of unusually excellent practice is the norms for the Minnesota Teacher Attitude Inventory. Here norms are based on teachers separated by levels of experience, amounts of training, and type of position. The teachers were obtained by a planned sample. The manual discusses differences between sex groups but does not present separate norms, as the decision to employ a particular man teacher rather than a woman would be based on the raw score of each, rather than upon their standings within their sex group.]

E 5.3. Some profile sheets record, side by side, scores from tests so standardized that different scores compare the person to different norm groups. Profiles of this type should be recommended for use only where tests are intended to assess or predict the person's standing in different situations, where he competes with the different groups. Where such mixed scales are compared, the fact that the norm groups differ should be made clear on the profile sheet. **VERY DESIRABLE**

E 6. The description of the norm groups should be sufficiently complete that the user can judge how his case differs from the group. The description should include number of cases, classified by relevant variables such as age, sex, educational status, etc. **ESSENTIAL**

E 6.1. The conditions under which normative data were obtained should be reported. The conditions of testing, including the purpose of the subjects in taking the test, should be reported. **ESSENTIAL**

Notehand for Psychologists

To save time and energy, systems of shorthand were developed as early as the first century A.D., and systems of notehand, which is less technical, much earlier.

As I remarked in the *American Psychologist* in 1947, few persons know shorthand; and any shorthand not written by an expert can be read only by the individual who wrote it and soon becomes "cold" for him. I therefore outlined a system of notehand adapted from Melvil Dewey (1) and others, which I had developed and tested in drafting copy for various readers and typists throughout 30 years, and offered to send a copy of this system to anyone in return for the approximate cost (3).

The response to that article stimulated several basic improvements, revision of the system to accord with them, and practical tests. The revised system uses capitalization only as in ordinary writing, except for the usual psychological *E* and *S*; improved abbreviations for many common words, general categories, and technical terms; abbreviations for a number of central roots and other common letter-groups; and, with certain exceptions, systematic abbreviation of suffixes. The abbreviations of central roots, other common letter-groups, and suffixes shorten hundreds of words that do not appear in the list. The remaining abbreviations are relatively consistent and few to avoid ambiguities.

Some 25 of the new abbreviations come, by kind permission, from Richard B. Seymour, who has developed a more elaborate system designed for typing (2). Thus his system accords with a general suggestion of F. L. Wells (4).

The present system reduces ordinary writing about 30 per cent and psychological writing, 35 per cent. It is primarily for making notes, drafting letters, manuscripts, etc., by hand. Some of the system cannot be typed. By using the system only in handwriting one can keep one's typing formal, as often it must be. However, much of the system can be adapted to typing.

Through adopting items progressively, the system is easy to learn to write. It is also easy to learn to read, especially when used only within complete sentences and regular punctuation.

Mimeographed copies of the revised system are available at cost. Send \$.20 in cash or \$.21 in stamps (foreign, \$.24 in postal-exchange slip) to 15 Pierce Hall, Northampton, Massachusetts.

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WILLIAM S. TAYLOR
Smith College

Industrial Psychology on the Undergraduate Level

Recently, the psychology department of the School of Business and Civic Administration of the College of the City of New York introduced a specialization group, or, as it is more commonly known, a college major, in industrial psychology. Although this school grants only the degree of Bachelor of Business Administration and most students major either in the field of accountancy or business administration, the faculty of the psychology department noted that a certain number of students were intensely interested in pursuing psychology as a profession. Of these, upon graduation from the College a fair proportion matriculated at various graduate schools of psychology. Such students, interested in the applications of psychology, have preferred to do their undergraduate work at the School of Business rather than at the College of Liberal Arts, where for years a major in psychology has been offered, even though this necessitated majoring in some field other than that of their primary interest.

So far as we know, an undergraduate specialization in industrial psychology is an innovation. Most innovations are likely to be controversial. This one will almost certainly prove no exception. The novel aspects immediately raise two issues: first, should an undergraduate in psychology be permitted to specialize in industrial psychology and, second, is such a specialization appropriate for a school of business?

The sponsors of this program obviously believe both questions deserve an affirmative answer. There has been a continual trend in the American college toward specialization. Schools of business are among the later manifestations of this trend. The curriculum has been enriched in most colleges so that the number of different subjects taught is now much greater than before. The natural consequence is to lead to specialization in areas in which it formerly was not feasible. Thus, not so many years ago psychology departments were affiliated with philosophy departments or education departments. This situation is no longer so widespread. A specialization in industrial psychology seems particularly appropriate for a school of business where

such subjects as economics, law, and other courses related to the industrial scene are already required for all students.

Whereas it might not have been appropriate to offer a major on the undergraduate level in industrial psychology as recently as ten years ago, a student is now able to take a sufficiently wide variety of courses related to industrial psychology to allow for such a reality.

The primary objective of the specialization offering industrial psychology is to prepare students for work in graduate school by training them to use statistical and experimental techniques, by familiarizing them with the various aspects of the applications of psychology, and by emphasizing the need for more knowledge in pure psychology as well as for advanced training in the applied field. Although it is recognized that occasionally such training may lead to limited psychotechnical positions of a terminal variety, the student is clearly informed of the preprofessional nature of this specialization group. The student is advised that the BBA degree with the specialization in industrial psychology will not result in the person's being employed as an industrial psychologist.

As prerequisite to admission in the specialization group a course in psychology and a course in statistics are required. A minimum of twenty-four college credits is required in the specialization group. Five courses are considered a common core and required of all students. These courses are vocational psychology, industrial psychology, interview techniques, advanced statistical methods, and experimental psychology. These requirements total sixteen credits. The remaining eight or more credits are of an elective nature; to complete the specialization group students elect courses from a larger offering. In the psychology department such courses are field trips in the psychology of business and industry, advanced personnel testing, the psychology of advertising, and any of the many typical liberal arts courses in psychology. The department also encourages students to elect in their specialization group certain other courses offered in other departments—for example, such courses as those in time and motion study, job evaluation, induction procedures and training programs, industrial sociology, etc.

Students normally elect their specialization group during their upper sophomore semester. Since the permission of the department is required for a major in industrial psychology, we have had to face the problem of accepting or rejecting an applicant. At present, admission is based on a personal interview during which emphasis is placed on the necessity for planning matriculation at graduate school. An annotated bibliography concerning the field of industrial psychology is distributed and an attempt is made to clarify each student's

ultimate vocational objective. Each instructor is informed whenever a student in the specialization group is in his course and the department holds two seminar meetings each semester for the majors. By carefully following the student during his last two years, the department expects to be in a position to make realistic recommendations when the student does apply for graduate work.

To evaluate such a program and to judge its full significance will take a number of years. In the meantime, it is believed that a description of the undergraduate specialization in industrial psychology might be of interest to psychologists in industry as well as those in the colleges who are training future psychologists. Questions and comments are especially welcome.

MILTON L. BLUM

College of the City of New York

The Licensing Law in Georgia

On February 21, 1951, the Georgia legislature approved House Bill No. 255, an "Act Creating and Establishing a State Board of Examiners of Psychologists." This Board is to consist of three members to be appointed by the governor. The bill states that "one member of the Board is to be chosen from and shall be a member of the faculty, with the rank of assistant professor or above, of the accredited colleges and universities in the state, and two members shall be licensed applied psychologists or qualified for licensure under the terms of the act." After the original members of the Board have served, all subsequent appointments are to be for three-year terms.

All appointments to the Board by the governor are to be made from a list of qualified members of the Georgia Psychological Association to be furnished to the governor by said association.

Before entering upon the duties of their office, the members of the Board are required to take the constitutional oath of office and file the same in the Office of the Governor, who then issues to each member a certificate of appointment. The Board must have available for the governor a detailed record of proceedings and present an annual report to him.

The members of the first State Board of Examiners of Psychologists are: Austin S. Edwards, University of Georgia, Athens; Hermon W. Martin, Emory University; Laurence W. Ross, Union Bag and Paper Co., Savannah.

Dr. R. C. Coleman, Joint Secretary of Examining Boards, functions as Secretary of the Board of Examiners of Psychologists.

Each member of the Board receives all necessary expenses incident to holding meetings, provided that expenses do not exceed the fees collected by the Board.

The Board issues licenses to approved applicants, said licenses being signed by the President of the Board of Examiners and attested by the joint-secretary, under the Board's adopted seal.

According to the provisions of the act, "No person shall use the title 'Licensed Applied Psychologist' in this state without a license granted by said Board of Examiners of Psychologists and signed by same. No person not licensed as provided in this Act shall designate himself or his occupation by the words 'Licensed Applied Psychologist,' nor shall such person designate himself by any other term or title which implies that he is practicing professional psychology, unless he has a valid license."

Any person who violates any provisions of the act is considered guilty of a misdemeanor and upon conviction shall be fined no less than one hundred dollars nor more than five hundred dollars.

It is the duty of the joint-secretary, under the direction of the Board, to aid the solicitors in the enforcement of this law and the prosecution of persons charged with the violation of its provisions.

Certain exceptions in the Act were provided:

"Nothing in this Act shall be construed to limit the activities and services of a person in the employ of or serving an established and recognized religious organization, an established and recognized social welfare agency, or the use of psychological techniques by organizations engaged in business, commerce, or industry, or by persons within their salaried employ provided that the title 'applied psychologist' is not used by a person not licensed and that the professional practice of psychology is not implied by a person not licensed under this Act."

Persons who are employed in federal, state, county, or municipal agencies, or in chartered educational institutions, or who are students in training in chartered educational institutions are exempted when practicing in their agencies or institutions, as are technicians, assistants, or interns working under the supervision of licensed individuals.

A candidate for a license must furnish the Board of Examiners of Psychologists with satisfactory evidence that he (a) is of good moral character; (b) is a citizen of the United States or has legally declared his intension of becoming one; (c) has received a degree of doctor of philosophy in psychology from an accredited educational institution recognized by the Board as maintaining satisfactory standards, or, in lieu of said degree, a doctoral degree in a closely allied field if it is the opinion of the Board that the training required therefor is substantially similar; (d) has had at least one year of experience in applied psychology of a type considered by the Board to be qualifying in

nature; (e) is competent in applied psychology, as shown by passing such examinations, written or oral, or both, as the Board deems necessary; and (f) has not within the preceding six months failed an examination given by the Board. The Board at its discretion may accept satisfactory substitute training and experience in lieu of that described under (c) and (d) above.

Examinations of applicants for a license are to be held at least once annually. The Board is to determine the methods to be used and the subject fields to be covered. The Board may require the examination to be written or oral, or both. If an examination is written, the paper is to be designated by a number instead of the applicant's name so that his identity shall not be disclosed until the papers have been graded.

For a period of two years from the effective date of the law, the Board may waive either an assembled examination or the requirement of a PhD. To merit such a waiver, the applicant must have engaged in the practice of applied psychology for at least three years full time, or its equivalent. The Board may also grant a license without an assembled examination to any person residing or employed in the state, if the person is licensed or certified by a similar board of another state whose standards, in the opinion of the Georgia Board, are not lower than those required by this law, or who has been certified by the American Board of Examiners in Professional Psychology.

Suspension, refusal, or revocation of a license is provided in the law on these grounds: the employment of fraud or deception in applying for a license or in passing the examination; conviction of felony; the practice of applied psychology under a false or assumed name or the impersonation of another practitioner; habitual intemperance in the use of ardent spirits, narcotics, or stimulants to such an extent as to incapacitate the individual for the performance of his duties.

The Georgia licensing bill is the result of the co-operative efforts of the psychologists in the state. They were greatly aided by the physicians who were members of the legislature in 1951. Several years of preliminary work preceded the actual passage of the bill. The several presidents of the Georgia Psychological Association deserve much credit for the ultimate success of the movement: Hermon W. Martin, Joseph E. Moore, Austin S. Edwards, M. C. Langhorne, and James E. Greene. The legislative committee, which did much fine work when the bill was finally passed in 1951, was composed of: Austin S. Edwards, Hermon W. Martin, Sidney Q. Janus, Laurence W. Ross, John Warkentin, and Joseph E. Moore, Chairman.

FLORENE M. YOUNG
University of Georgia

Across the Secretary's Desk

A NATIONAL HEADQUARTERS BUILDING FOR APA

The APA owns a building. After more than a year of intensive searching, investigating, and dickering by the Building Committee,¹ a deal has been consummated. On May fifteenth the District of Columbia Board of Zoning Adjustment gave the APA permission to occupy the property we had most recently bargained for, and on May sixteenth money and the deed changed hands. On July eighteenth, local authorities issued a permit for proposed remodeling. Officially, psychologists own a building; now we face the jobs of (a) remodeling it and (b) paying for it.

The building (see picture) is located at 1333 Sixteenth Street N.W., at the corner of O Street. It is one block north of Scott Circle, three blocks north of the Statler Hotel, five blocks north of the White House, and one block south of the Carnegie Institution of Washington. It is within two blocks of the American Chemical Society, the American Council of Learned Societies, the National Education Association, and the National Geographic Society. It is within three blocks of the American Council of Education and the many organizations housed in the ACE building. Geographically, psychology will be in good company.

The building was erected somewhat before 1900 by Burke Cochrane, congressman from New York. It was almost completely rebuilt in the 1920's by a wealthy coal operator who had a number of eligible and sociable daughters. At that time, the building was expanded, equipped with gargoyles and made over in the style of a French chateau. Its plumbing was not essentially altered. In the mid-thirties, the building fell on evil days and was used as a rooming house. For the past three years it has been vacant.

The house is of brick construction but has enough steel in it to keep it sound and unsagging. Outside, the masonry has been surfaced with concrete so as to give the appearance of sandstone construction.

The building now contains five stories, thirty rooms, and ten baths. There are approximately

15,000 square feet of floor space in the main building and an additional 3,000 or so, not including a dungeon-like, iron-doored wine cellar, in the very solid coach house in the rear. In decor, the building is characterized by such things as vast areas of walnut parquet flooring, a double staircase of mahogany, walnut paneling over extensive areas of wall, large stone fireplaces, one of which seems to have been imported from Europe; diaphanously draped nymphs gamboling on the ceilings, and a 30' x 30' conservatory with a Wundt-like figure spewing water into a tiled fountain.

Superficially, the house is in miserable shape. Condensation and a cluttered gutter have done considerable damage to walls, ceilings, and floors. Our architect says, however, that all damage can be repaired with relative ease by plasterers, scrapers, and painters. The building will need the additional repairs and remodeling listed below.

FINANCES

The building, when renovation is completed, will represent a \$230,000 investment for American psychology. The asking price for the property, in its state of splendid disrepair, was \$110,000. Our real estate consultant agreed it was probably worth this amount but advised us to offer \$75,000. We did. No deal. There was hard dickering between the owner and the Building Committee. The price settled down at \$90,000. The Board of Directors, after studying estimates of reconditioning costs, authorized its purchase at that price. Original estimates indicated that for an additional \$110,000 we could repair the building and put it completely in shape for a new start in life. As almost everybody seems to have anticipated, however, unanticipated factors have run the final estimate up to \$140,000 for remodeling and furnishing, and a total of \$230,000 for the whole project. Our experts agree that we have a pretty good bargain at this price, that the renovated building will be immediately worth a quarter of a million dollars on the current Washington market—which, our local experts sagely observe, has never gone any way but up. It does seem very possible that our building, since it is located in what most people would regard as the two "worst" blocks on the whole length of prestigious Sixteenth Street, will appreciate in value

¹ The Building Committee, appointed by the Board of Directors in 1950, was chaired by Jerry W. Carter, with Dael Wolfe and F. H. Sanford, members.

as these two blocks gradually improve—a trend we may well accelerate by reconditioning and beautifying our own building.

With the approval of the Board of Directors, the House Committee² secured on a formal basis the services of the architects who have served as our advisors (Johnson and Boutin) and arranged to work with a highly recommended contractor (V. J. Miller Construction Company). The contractor and architects have secured competitive bids from subcontractors for the various parts of the project and we now have relatively firm estimates of what the entire project is going to cost. The following list gives a few details of planned alterations and indicates the approximate costs.

Elevator and elevator shaft	\$ 20,000
Painting interior, exterior, and coach house	11,000
Plastering; replacing much injured plaster, plastering new partitions	13,000
Refinishing floors	1,000
Rough carpentry (un-carpentering mostly)	2,000
New plumbing (necessary if we do not wish to gamble on broken pipes)	9,000
New wiring (required by new building codes) ...	10,000
New heating system (probably gas, cheaper in the long run)	9,000
Repair coach house for use as office by potential tenant	5,000
Air conditioning (3 large units to cover four floors of building)	15,000
Furnishing and moving	15,000
Repair and insulate roof	4,000
Architects' fee (normally 15%)	12,000
Contractor's fee (normally 10%)	5,000
Contingency	3,000
Total, remodeling costs	\$137,000
Purchase price, including fees	93,000
Total	\$230,000

For this total of \$230,000 we will have a building in most respects as good as new. In many respects, of course, it will be better than new if (a) any value is placed on such tangible things as walnut paneling, sculptured ceilings, and leaded windows and (b) if there is appreciation of such things as graciousness of air and spaciousness of vista. The cost of building these things—tangibles or intangibles—into a new structure would be prohibitive. The building and coach house contain a

² The House Committee, originally appointed by the Board of Directors in September 1951, is composed of Jerry W. Carter, chairman; Thelma Hunt, Harry J. Older, and F. H. Sanford.

total of about 225,000 cubic feet. This space will thus cost us about \$1.00 per cubic foot. New school buildings now cost about \$1.25 per cubic foot and modern office buildings cost around \$1.75 per cubic foot. If we calculate replacement cost of our main building at \$1.50 a cubic foot and of our coach house at \$1.00 a cubic foot and if we place a value of \$60,000 on our land, we arrive at the figure of \$372,000 for a new building of the same size in a comparable location. An already existing building in a state of good repair would cost us more than the \$1.00 per cubic foot we are paying.

Perhaps, in an office building, square footage is a more important consideration than cubic footage. Our property contains a total of about 18,000 square feet. Thus the property will cost us something under \$13.00 per square foot. The other building the Board seriously considered would have cost around \$20.00 per square foot. (Not all of the 18,000 square feet represent "net" space—space immediately usable for offices. There are large foyers and corridors. Much of this nonfunctional space, however, can be converted to "net" space if we ever need to be rigorously efficient in the use of the building.)

All in all, the objective observer would probably agree that the Association has a good buy.

The best present estimates of annual operating expenses are as follows:

Heat, light, gas	\$2,000
Upkeep	1,000
Insurance	600
Janitor (housed on top floor of building)	2,000
	<hr/>
	\$5,600

These figures do not include lost interest on the money that will go into the property nor do they take account of the \$3,000 annual rent we will save. At present rates of interest on our investments, however, these two figures will come close to canceling each other, leaving a figure somewhere between five and six thousand a year to operate the building.

There is good possibility that we can lease some of our space to related organizations. Already one organization is seriously interested in occupying the second floor of the coach house. (We will use the first floor for parking.) Current indications are that we can realize \$3,000 a year from this space if we air condition it and refurbish it tastefully. We can get another \$4,000 or more per year from

the rental of the fourth floor in the main building, space which APA clearly does not now need. There is no absolute certainty that the Board of Zoning Adjustment will allow us to have tenants, but there is a good possibility that we can realize \$7,000 or more income from the property. This income will at least operate the building and perhaps pay enough interest to finance a few pages in our journals.

THE PROCESS OF REMODELING

The Board of Directors has set down certain general principles to guide the remodeling of the building and has instructed the House Committee to take over the detailed supervision of the job. The House Committee first had the architects draw up plans that seemed to represent the best general implementation of the Board's instructions. These plans were submitted to the Board and given general approval. The plans were based on an optimistic over-all budget of \$200,000 for the project. Then it became apparent that the building, to meet sound standards of safety and efficiency, would need new plumbing, new wiring, and a new heating plant. Failure to replace any of these three items would jeopardize the total investment. Most members of the Board expressed no surprise at this development and voted to authorize a total budget of \$230,000. Operating with this budget the architects and contractor then set to work sifting competitive subcontracts for the separate parts of the job. These subcontracts will be studied by the architects and contractor and reported to the House Committee who will, in turn, study them before the contractor signs them. The furnishings and interior decorating will be handled by a member of the architects' firm and will be under supervision of a subcommittee of the House Committee. The architects have access to the skills of electrical engineers, heating engineers, and lighting engineers. All told, the project will involve approximately 7,263 separate decisions. The established mechanism can probably handle the load and can probably be counted on to yield a good proportion of intelligent decisions—if no member of the House Committee cracks under the strain or escapes to a trout stream.

The over-all principles followed in the remodeling project are (a) that we're building for 50 years, (b) that we should not skimp or cut corners but (c) that we get about \$1.08 solid value for every dollar spent.

All in all, the building will represent a very comfortable, very handsome home for American psychology. It will be furnished well but not lavishly, in the general manner of a good faculty club. It will be well heated in the winter and well cooled in summer. (Washington administrators estimate that air conditioning pays for itself in a few years in terms of assistance in securing, keeping, and keeping efficient, members of an office force. It's not the heat; it's the humidity.) Its roof will be slate, its pipes copper, its wires new, its beams sturdy, its walls smooth, and its floors gleaming. With reasonable care the building should be good for fifty years of use. If it then falls apart, we—or the APA members of the next century—will have an ideal site for the erection of such a structure as may prove suitable.

We will have adequate room for present and foreseeable Central Office functions. We will have, glory be, space for employees and visitors to park their cars. We will have comfortable and pleasant places for visiting members to sit when they come to the Central Office. We will have a commodious Board Room for use by our own groups and by any of psychology's friends toward whom we feel hospitable impulses. The many psychologists who have business in Washington will have a place to meet with their colleagues or with representatives of government—a place of which they may well be proud. We can, if the Association so wills, install the complete psychological library that some members want and the psychological museum desired by others.

Many members of APA think it right and proper and highly desirable that American psychology overcome its "poor man's complex" and represent itself to itself and to the world at large as what it is—a cardinal significant factor in the intellectual and social development of American culture. There are many people in Washington and elsewhere who make decisions affecting the science and the profession of psychology without having the time nor the inclination to figure us out as we really are. They react to us as we represent ourselves to be. The new National Headquarters puts a collar, tie, shoes, and a respectable suit on American psychology, moves it down out of the attic and gives it a front room on the first floor. It tells the world that we are respectable, responsible people, and that along with the American Chemical Society, the American Association for the Advancement of

Science, the National Educational Association, and the American Council of Learned Societies APA is here to stay as a solid and integral part of the American scene. There cannot be much doubt that psychology, both as a science and as a profession, has arrived. Home ownership appropriately symbolizes this arrival and will assist psychology in many ways to commit well the responsibilities that come with public acceptance.

Neither the architects nor the contractor will—or can—give us precise answers about a moving date. It is clear that the elevator cannot be installed until December or January. There seems a fair chance that the Central Office can move in by October first. There is no doubt that APA members attending the Annual Meeting in Washington will have an opportunity for knot-holing the project. Perhaps there can be some sort of reception in the building or in parts of it that are completed, with members sitting on saw-horses sociably sipping ginger ale. Maybe we can have some sort of unveiling or christening or wetting-down ceremony. At any rate many members will have a chance to see much of what they own and at least to visualize the rest.

PAYING FOR THE PROPERTY

Owing to the astuteness of past administration of the Association's finances, we had, at the end of 1951, an enviable total of \$155,000 in our building fund. Last September the Council of Representatives voted that we should raise by contributions from our members any supplementary amount needed for the building project. This means that we will need \$75,000 to pay for the property. This averages out to about \$7.50 per member. The Board of Directors has decided against an assessment and in favor of purely voluntary contributions. There has been a good deal of talk about ways of conducting a campaign for funds, about ways of organizing things so that psychologists could contribute in ways most compatible with their own impulses. Do we simply tell our members about the need and ask them to help, or should we invent mechanisms for the gentle shepherding of impulses to insure that psychologists give into their genuine and generous inclinations rather than some wayward bent toward retentiveness? Should all gifts be anonymous or should there be public recognition of those who give?

Should we have procedures whereby groups of psychologists can contribute to memorializations of psychology's revered figures? Is a direct appeal by mail likely to be adequate or do we need the personal approach to those thought to have the means to make heavy contributions? Should we appeal directly to our members as individuals or should we work through local, state, and regional organizations of psychologists?

Some sort of campaign will begin in the fall when psychologists settle down after their summer peregrinations. The Board of Directors and Council of Representatives will discuss in September the nature of this campaign and will welcome suggestions from anyone who has ideas and/or feelings about the sort of questions raised above.

A number of people, having heard that a building has been purchased and that funds are needed, have jumped the gun and have made completely spontaneous contributions. During the summer the chairman of the department at Northwestern "got to musing" that the Board and Council would appreciate some early support and approval for having decided on so large a project. He mentioned his musings to his colleagues. They agreed that the musings were good. The resulting contribution, in therapeutic and negotiable terms, was handsome.

At a meeting in June the Finance Committee, while talking about other matters, suddenly came down with an involvement in the building project. Each attending member wrote out a check on the spot. The absent member, by apparently telepathic means, caught the same fever and sent in a check. The Illinois Psychological Association has made a contribution. The Midwestern Psychological Association has declared its official interest in making a contribution as soon as the necessary negotiations are completed. Members of the APA Board of Directors made almost negotiable declarations of intent at the spring meeting but most of them have waited for the final facts on cost before writing checks.

These spontaneous combustions are bound to give great encouragement to Board and Council. They represent another bit of gratifying evidence that psychologists are involved in their national organization. Also, of course, the gifts represent hard cash. But \$75,000 is a considerable sum. There is a long way to go.

FILLMORE H. SANFORD



NATIONAL HEADQUARTERS OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

Psychological Notes and News

Walter V. Bingham died July 7, 1952 at the age of 71 after a long illness. Since 1946 he had been chairman of the council of advisors to the director of personnel and administration of the Army General Staff.

Florentine Hackbusch, chief clinical psychologist of the Bureau of Mental Health, Pennsylvania Department of Welfare, died on June 3, 1952 at the age of 64 years.

Frederick S. Breed died on May 16, 1952 at the age of 77 years. Since 1941 he had been associate professor emeritus of education at the University of Chicago.

R. R. G. Watt, professor of psychology and director of the testing bureau at the University of Southern California, died May 17. He was 50 years old.

Donald B. Lindsley, professor of psychology at the University of California, has been elected a member of the National Academy of Sciences.

C. R. Carpenter, professor of psychology at Pennsylvania State College, has been named the new head of the department of psychology. He will succeed Bruce V. Moore who retires with emeritus rank on October 1. Dr. Moore will become the executive officer of the APA's Education and Training Board and will be working in the Central Office in Washington.

Neal E. Miller has been appointed James Rowland Angell Professor of Psychology at Yale University. The newly established professorship commemorates Mr. Angell's sixteenth year as president of Yale, and his great influence in the founding of the Institute of Human Relations. Dr. Miller has been on the Yale faculty since 1936, having been made professor in 1950. Frank A. Logan and Burton S. Rosner have been appointed assistant professors of psychology at Yale University, part time. The remainder of their time will continue to be devoted to their activities as postdoctoral fellows under the Ford Foundation, in the Institute of Human Relations at Yale. S. Rains Wallace,

director of research for the Life Insurance Agency Management Association of Hartford, Conn., has been appointed part-time lecturer in personnel psychology at Yale University. Robert P. Abelson, of Princeton University, has been appointed an instructor at Yale. He will work in the Attitude Change Project with Carl I. Hovland, as well as in the department of psychology.

T. W. Richards, formerly at Northwestern University, will join the faculty of the psychology department of Louisiana State University as professor of psychology and associate professor of neuropsychiatry in the medical school.

Thomas W. Harrell has been appointed professor of applied psychology, Graduate School of Business, Stanford University.

Frank J. Harris has resigned his position as research psychologist with the U. S. Public Health Service and accepted a position as operations analyst at The Johns Hopkins University, Operations Research Office in Chevy Chase, Maryland.

Charles P. Sparks was recently elected to the board of directors of Richardson, Bellows, Henry and Company. He has been manager of the New Orleans office of the firm for the past three years.

John W. Reid, recently of Teachers College, Columbia University, has joined the staff of the department of psychology of Fort Hays Kansas State College at Hays, Kansas.

Carroll L. Shartle has been appointed director of research at the Human Resources Research Institute, Air University, Maxwell Air Force Base. He will continue on a part-time basis as professor of psychology at the Ohio State University.

Robert R. Sears, director of the Laboratory of Human Development at Harvard University, has been appointed head of the department of psychology at Stanford University, effective September, 1953.

Ivan D. London, formerly with the Russian Research Center, Harvard University, is now assistant professor of psychology at Brooklyn College.

At the University of Wisconsin Frederick A. Mote has been promoted to professor and three new appointments have been made. Horace A. Page has been appointed as assistant professor in clinical psychology, E. James Archer has been appointed instructor in experimental psychology, and S. H. Friedman has been named lecturer in clinical psychology.

Dwight W. Chapman, Jr. has accepted appointment as professor of psychology and chairman of the psychology department at Vassar College, beginning with the new academic year. During the past year he has been professor of social psychology at the University of Michigan. M. Brewster Smith, formerly professor of psychology and chairman of the department of psychology at Vassar, joined the New York staff of the Social Science Research Council on a part-time basis this spring.

Eugenia Hanfmann of the department of social relations, Harvard University, has accepted an appointment as associate professor of psychology and director of the psychology clinic at Brandeis University, Waltham, Massachusetts.

Julius Laffal has been appointed research assistant in the department of psychiatry, Yale University.

Harold Bessell has been appointed psychologist on the staff of the Wichita Guidance Center.

Eli Z. Rubin has been the chief psychologist at the Emma Pendleton Bradley Home and on the teaching staff at Brown University since September of 1951. He was formerly with the children's psychiatric unit of the Massachusetts General Hospital and Boston University.

On February 15, 1952 W. J. Humber and Paul J. Mundie formed a partnership for the practice of industrial psychology in Milwaukee, Wisconsin. John D. McClary joined the firm as a partner on May 15.

R. J. Wentworth-Rohr, director of the Psychological Adjustment Services, 1 Fifth Avenue, New York City, announces the appointment of F. F. Merino, MD, as psychiatric consultant and John Nichols, MD, as medical consultant.

Edward M. Glaser has resigned from the Los Angeles staff of Rohrer, Hibler & Replogle and has founded Edward Glaser & Associates, Psychological Consultants to Management. The first office of the new organization is in Pasadena, California. Hubert S. Coffey, located in Berkeley, is a part-time associate in the San Francisco Bay Area. Other associates or affiliates are located in Chicago, Denver, Gainesville (Florida), Milwaukee, Minneapolis, New York and San Francisco to provide nation-wide service.

Joseph E. Barber, formerly chief of the advisement and guidance section of the United States Veterans Administration at Syracuse, New York, has been appointed an educational and training research specialist with the Bureau of Naval Personnel in Washington, D. C. Dr. Barber has been with the VA since June 1946.

L. D. Hartson is retiring from his professorship at Oberlin College. He will be visiting lecturer at Ohio State University in the department of psychology during the year 1952-53.

Samuel M. Seltzer is now clinical psychologist at the Mental Health Institute in Clarinda, Iowa.

Sheldon B. Peizer, formerly chief psychologist, institute for psychological services of the Illinois Institute of Technology, accepted a position as staff psychologist, Ohio State Reformatory, beginning July 1. DeWitt E. Sell is chief psychologist at the Ohio State Reformatory.

Benjamin G. Lewis, formerly clinical psychologist of the Shawnee Guidance Center, Topeka, Kansas, is now on the staff of the psychiatry department of the student health service at the University of Kansas.

Emanuel F. Hammer has given up his position of director of intern training at Lynchburg State Colony, Virginia, to accept an appointment on the research project at Psychiatric Institute, New York City. Irving Jacks, formerly psychologist at Attica Prison, has also accepted a position as research assistant on the research project at Psychiatric Institute.

The staff of the psychology section of McGuire VA Hospital, Richmond, Virginia, now includes the

following personnel: William E. Harris, chief; Jacob Silverberg, assistant chief; William A. Zielonka, John J. McMillan, and Harold Lindner. Clinical psychology trainees assigned to this hospital at the present time are: Janet Haas, Twila Stoss, Herbert Eber, and Carl M. Cochran from the University of North Carolina, and Ralph Colvin, William Dunn, Robert R. Alvarez, Robert L. Rhyne, and John Mallet from Duke University.

Max M. Levin resigned from the department of psychology, University of Washington, on March 31, 1952, to take the position of training specialist in psychology in the National Institute of Mental Health, United States Public Health Service.

Merle Lawrence is leaving, as of September 1, 1952, his position as associate professor of psychology at Princeton University to join the medical school faculty at the University of Michigan as associate professor of physiologic acoustics in the department of otolaryngology.

The Personnel Research Section, Personnel Research and Procedures Branch, AGO, has announced the following personnel changes in its contract research office, effective approximately July 1, 1952. Arthur J. Drucker will replace Robert Perloff as assistant contract research officer. James B. Trump has recently been assigned to the contract research office. Dr. Drucker, who has been working in the criterion and standards research sub-unit for the past year, and Dr. Perloff are exchanging assignments. The changes reflect the section's policy of maximizing the individual's opportunities for broadened professional experience and increased responsibility. It is anticipated that Dr. Perloff will become acting chief of criterion and standards research under the general direction of Richard H. Gaylord. Similarly, it is expected that Dr. Drucker will assume increasing responsibility for contract research. Mr. Trump has been research associate in the Personnel Research Section for approximately a year.

Denzel D. Smith has been appointed head of the personnel and training branch of the Psychological Sciences Division, Office of Naval Research, Department of the Navy. He has been professor of psychology at the University of Maryland and director of the University's counseling center.

Marguerite Young, formerly acting head of the personnel and training branch, has accepted a position in the Biological Sciences Division, National Science Foundation.

William Bevan, Jr., assistant professor of psychology at Emory University, has been awarded a Fulbright fellowship. He will do research at the University of Oslo during the 1952-53 academic year.

Erwin Russell, formerly of the department of psychology at Wabash College, has joined the Milwaukee staff of Rohrer, Hibler & Replogle.

Leonard S. Kogan has been appointed director of the Institute of Welfare Research of the Community Service Society of New York. He is also adjunct professor of psychology at New York University.

John W. Gustad has resigned as director of the counseling service at Vanderbilt University to take the position of associate professor of psychology and director of the university counseling center at the University of Maryland. He began his new duties on July 1.

Ludwig Immergluck, formerly on the faculty at Sarah Lawrence College, has accepted appointment as supervisor of the intensive treatment section service and training unit, clinical psychology service, Veterans Administration Hospital, Palo Alto, California. He began his new duties early in August.

A. J. Pellettieri has accepted the position of professor of psychology and director of the reading clinic at the University of Houston. He formerly held the same positions at Mississippi Southern College.

Harry Sands has resigned his position as instructor in the psychology department of Brooklyn College to become Director of the Committee for Public Understanding of Epilepsy in New York City. This Committee was set up on a grant for the purpose of carrying on public education in the field of epilepsy.

Clark L. Wilson, formerly partner and administrative director, and Robert R. Mackie, formerly research psychologist of the Psychological Research Center, are now president and vice-president, re-

spectively, of the Management and Marketing Research Corporation, Los Angeles.

Rhoda Lee Fisher has received the appointment of clinical psychologist for the Southwestern Polio-myelitis Respiratory Center in Houston, Texas.

Paul Bowman of the University of Louisville has been appointed assistant professor of human development at the University of Chicago. He will serve as chief consultant to the Quincy Youth Development Commission. He will head the three-man staff from the University of Chicago which works in the Community Youth Development Project, a cooperative enterprise of the Quincy Commission and the University of Chicago. In this project, children of unusual talent and ability are discovered as early as possible and assisted to develop their talents. Also, children who show signs of future delinquency or emotional disturbance are discovered and given help as early as possible.

Norman L. Munn was granted sabbatical leave by Bowdoin College and sailed in June for New Zealand and Australia, where he is visiting various departments of psychology. He will return to Brunswick in January.

Frederick Wyatt has accepted an appointment as chief of the psychological clinic of the Institute for Human Adjustment at the University of Michigan. He has also been appointed associate professor in the department of psychology.

James G. Cooper, general supervisor in charge of guidance of the Modac County, California, schools, has been teaching this summer at Stanford University.

J. W. M. Rothney, of the department of education at the University of Wisconsin, was cited for his outstanding contribution to the personnel and guidance movement through research at the recent national convention of the American Personnel and Guidance Association. This award is given annually to the member of the association who has made the most outstanding research contribution to the field. Mr. Rothney's award was based upon his publication, with B. A. Roens, of "Guidance of American Youth."

Maurice E. Troyer is on an indefinite leave from Syracuse University to help organize the new

International Christian University in Japan. His main responsibility is in program development, student personnel, and preparation for chartering request. During the planning stage of the program the University is seeking faculty members from abroad who will commit themselves to three years of service. Beyond that period they hope to make use of opportunities for exchange professorships and professors on sabbatical leaves.

W. C. H. Prentice, on sabbatical leave from Swarthmore College during 1952-53, will spend a year on a Guggenheim fellowship at the University of California in Berkeley.

Georgia Lightfoot has been teaching on the summer session staff at the University of Vermont.

Robert E. Bills has been teaching this summer at the University of Florida, Gainesville. He will return to the University of Kentucky for the fall semester.

Leonard D. Carmichael has been awarded an honorary doctor of science degree by Brown University.

J. E. W. Wallin has been awarded the Alpha Phi Omega Alumni Award at Upsala College. The award was made in recognition of his 51 years of achievement in the field of psychology.

Walter Houston Clark has been appointed dean of the Hartford School of Religious Education of the Hartford Seminary Foundation.

Charles A. Dickinson, professor of psychology at the University of Maine, was awarded an honorary doctor of science degree at the 1952 spring commencement exercises of the University of Maine.

The American Board of Examiners in Professional Psychology, Inc., now consists of the following members and officers: George A. Kelly, president; David Wechsler, vice-president; Noble H. Kelley, secretary-treasurer; Carlyle F. Jacobsen, Jean W. Macfarlane, Harold C. Taylor, Ruth S. Tolman, Austin B. Wood, and C. Gilbert Wrenn.

All correspondence regarding the Board should be addressed to the secretary-treasurer, Dr. Noble H. Kelley, Department of Psychology, Southern Illinois University, Carbondale, Illinois.

The American Board of Examiners in Professional Psychology, Inc., announces the following

policy concerning examination privileges and examination fees:

"If a candidate fails once to appear for a regularly scheduled written examination for which he has registered and local arrangements have been made by the Secretary-Treasurer, he shall pay an additional fee of fifteen dollars to be admitted to another written examination.

"If a candidate fails twice to appear for a regularly scheduled written examination for which he has registered and local arrangements have been made by the Secretary-Treasurer, his candidacy shall be closed. To be reconsidered, the candidate must file a new application, which must be accompanied by a second candidacy fee of twenty-five dollars."

The American Board of Examiners in Professional Psychology, Inc., announces herewith the award of its diploma to another twelve psychologists in the indicated professional specialties. To date, this represents a total award of 1,087 diplomas. These awards are distributed as follows:

Diploma awarded to senior members of the American Psychological Association with waiver of written and oral examinations	1,046
Diploma awarded to members of the American Psychological Association by satisfactory performance on written and oral examinations	28
Diploma awarded to senior members of the Canadian Psychological Association with waiver of written and oral examinations	13
	<hr/> 1,087

In nine previous issues of the *American Psychologist* (Volume 3, Number 5, May, 1948; Volume 3, Number 8, August, 1948; Volume 4, Number 6, June, 1949; Volume 4, Number 8, August, 1949; Volume 5, Number 6, June, 1950; Volume 5, Number 11, November, 1950; Volume 6, Number 8, August, 1951; Volume 7, Number 1, January, 1952; Volume 7, Number 5, May, 1952), the Board has announced the award of its diploma to 1,047 senior members in professional fields of psychology on the basis of a review of individual qualifications and without written and oral examinations.

The award of diplomas to 28 candidates who have qualified by satisfactory performance on written and oral examinations has been separately announced in the *American Psychologist* (Volume 6,

Number 3, March, 1951; Volume 6, Number 8, August, 1951).

The 1,075 awards previously announced together with the 12 awards presently announced bring the total number of awards to 1,087.

Name	Field
Barrett, Harry O.*	Counseling and Guidance
Bayroff, Abram G.	Industrial
Greene, Katharine B.	Clinical
Laird, Donald A.	Industrial
Lerner, Ruth S.	Counseling and Guidance
Max, Louis W.	Counseling and Guidance
Obenchain, Irving R.	Counseling and Guidance
Pomeroy, Wardell B.	Clinical
Rogers, Kenneth H.*	Counseling and Guidance
Stein, Harry L.*	Counseling and Guidance
Webster, Edward C.*	Industrial
Wolf, Katherine M.	Clinical

* Members of the Canadian Psychological Association.

Newly elected officers of the **New York State Psychological Association** are Harold Seashore, president-elect; Elinor J. Barnes, secretary; Frank S. Freeman and S. D. Shirley Spragg, upstate representatives; Roger T. Lennon and Percival M. Symonds, downstate representatives; Arthur W. Combs and Wallace H. Wulfeck, representatives to the Conference of State Associations. L. Joseph Stone is now president of the Association.

At its last annual meeting the Board of Trustees of the **Ohio Psychological Association** elected Randal M. Wolfe as treasurer to replace Ronald R. Greene who was elected to the office of president-elect by the membership. Arthur G. Bills is president and Rosina M. Brown is secretary. Carroll L. Shartle has been elected to the board of examiners, replacing John R. Kinzer who is now statutory agent for the Association.

At the request of the New Jersey Parents Group for Retarded Children, the **New Jersey Psychological Association** has appointed a committee to screen and recommend research projects in the field of mental deficiency for financial support by the parents group. For the present, the committee will limit its study to plans submitted by people in the region of the Eastern Psychological Association.

Any significant project, regardless of scope, cost, or subject matter, will be considered by the committee. Projects should be of the sort which will yield results within a year's time and they must be practicable in the sense of being ready to start in

the fall of this year. The committee consists of Warren G. Findley, Elizabeth M. Kelly, Maurice G. Kott, Kermit W. Oberlin, Eloise Oxtoby, Anna S. Starr, and Karl F. Heiser, chairman. Correspondence and research plans should be sent to the committee chairman at The Training School, Vineland, New Jersey.

Present officers of the **Maine Psychological Association** are: John K. McCreary, president; J. Paul Scott, president-elect; E. Parker Johnson, secretary-treasurer; A. Douglas Glanville, delegate to the Conference of State Psychological Associations; Edward N. Brush and Arthur J. Kaplan, executive council.

The newly elected vice-chairman of the **Minnesota State Board of Examiners of Psychologists** is Daniel N. Wiener, and Timothy O'Keefe is a new Board member. One hundred and forty-five state psychologists were certified during the first year of the law.

The annual spring meeting of the **West Virginia Psychological Association** was held on the campus of West Virginia Wesleyan College. The following officers were elected for the coming year: Georgianne Stary, president; Robert P. Fischer, president-elect; James P. Bland, secretary-treasurer; Quin F. Curtis, Kenneth K. Loemker, Herman G. Canady, council representatives. The afternoon session of the meeting was highlighted by a panel discussion on the subject "The Certification of Psychologists in the State of West Virginia." The participants in this panel included C. G. Polan, a well-known psychiatrist from Huntington, West Virginia. The evening program and banquet was featured by an address by James R. Patrick, chairman of the department of psychology at Ohio University, who spoke concerning professional ethics of psychologists and also many of the problems pertaining to the certification of psychologists. A fall meeting is also planned for the State Association in October.

The annual meeting of the **Delaware Psychological Association** will be held on Monday, October 15, in the Wilmington Board of Education Building and Hanna's Restaurant. The following is a plan for the meeting: 12 noon—executive committee luncheon at Winkler's Restaurant; 2 p.m.—business meeting, Board Room, Wilmington Board

of Education; 3–5 p.m.—presentation of papers by members of the group and discussion, Board Room, Wilmington Board of Education; 7 p.m.—dinner meeting with speakers, Hanna's Restaurant. Further information may be obtained from Catharine L. Hultsch, secretary of the Association.

Gordon F. Derner, associate professor of psychology at Adelphi College, was elected the first president of the newly formed **Nassau County (New York) Psychological Association**. Also elected were Mathew N. Chappell as president-elect; Melvyn M. Katz, treasurer; Beverly Weiner, secretary, and Cynthia Deutsch, corresponding secretary.

Rollo May spoke on the psychology of freedom at the annual meeting of the **New York Society of Clinical Psychologists** at the Hotel New Yorker on June 7, 1952 at which time the following new officers were installed: Molly Harrower, president; Max Siegel, president-elect; Emerson Coyle, treasurer; and Doris Schulman, executive secretary.

SPSSI and the Division on the Teaching of Psychology will jointly sponsor a symposium at the APA meetings on "The Problems of Teaching Introductory Social Psychology." One of the issues that has been suggested for discussion concerns the proper use of a textbook in the introductory course. Accordingly, the symposium will feature several of the major social psychology textbook authors together with a person who will argue that the use of a textbook causes more problems than it solves. Other topics suggested have to do with the problem of values; whether "skills" should be taught, etc. In order that this symposium, which will be an informal discussion, will have the maximum practical value, we are inviting all interested teachers to submit, ahead of time, other problems they would like to have discussed. Please write as soon as possible to Dr. Robert P. Holston, Richardson, Bellows, Henry & Company, 439 Madison Avenue, New York 22, New York.

Work Conference in Mental Health Research. An interdisciplinary work conference in mental health research will be held in Washington, D. C., August 29 through 31 under the leadership of Hubert Coffey, John Clausen, and Jerome Frank. This is the fourth in a series of conferences being

conducted under a grant from the National Institute of Mental Health, announced in the *American Psychologist* of August 1951.

The project was established because of the need, expressed by workers in the field, for an exchange of thinking and experience regarding methods and problems of interdisciplinary collaboration in mental health research. The general objective, as stated by the Advisory Committee, is "to stimulate research in mental health through the collaborative study of how the concepts and methods of relevant disciplines may be better understood and used."

Conferences have been held prior to the meetings of the American Anthropological Association, the American Orthopsychiatric Association, and the American Psychiatric Association. These have been concerned with (a) the analysis of specific research projects, (b) consideration of effective methods for carrying on research when an interdisciplinary approach seems indicated and of ways to meet the difficulties which arise, and (c) the questions relevant to mental health which are real issues for the practitioner and on which research should be done. Conference discussions have pointed up the fact that in the development of research plans there has been relatively little anticipation of the problems actually encountered in the research, and as a result, in many instances, projects have been beset with unexpected yet common difficulties without any established pattern for handling them. Through their efforts to analyze the components and processes in interdisciplinary research, the conferences have developed a number of stimulating lines of inquiry, which will in part provide the springboard for the Psychology Work Conference, August 29-31. High lights of this conference which are of particular interest to psychologists will be discussed at a meeting on September 1 as part of the program of the APA. Reports of the conferences will be available through Work Conferences in Mental Health Research, 1201 16th Street N.W., Washington 6, D. C., care of Margaret Barron Luski, Project Coordinator.

Newly elected officers of Psi Chi, national honorary society in psychology, for a two-year term are Kenneth L. Smoke, chairman of the department of psychology of Gettysburg College, president; Hubert Bonner, professor of psychology, Ohio Wesleyan University, vice-president of the Midwestern Region; and Philip Worchel, associate pro-

fessor of psychology, University of Texas, vice-president of the Southern Region. Terms of office to be continued are those of C. E. Hamilton, vice-president of the Rocky Mountain Region; and David L. Cole, vice-president of the Western Region. Mrs. J. P. Guilford is historian, and Mrs. Bertram R. Forer is national secretary-treasurer.

The Ohio University Chapter of Psi Chi has recently awarded to an outstanding student in psychology, Ann Hammerle, a year's subscription to the *American Psychologist*.

The Aero Medical Association will hold its interim meeting in Paris on September 26-28, 1952. For information, write to Dr. Armand Robert, 2 Rue Marbeuf, Paris 8^e, France.

As a part of its interdisciplinary research planning program, the **Organizational Behavior Project** of Princeton University held two conferences during the past academic year. In March the subject was: "Problems of Model Construction in the Social Sciences." Papers were read by: Gregory Bateson, anthropologist; Kenneth Burke, literary critic; Robert R. Bush, mathematical statistician; Karl W. Deutsch, political scientist; James S. Duesenberry, economist; Paul F. Lazarsfeld, sociologist; Frederick Mosteller, mathematical statistician; Alfred Schuetz, sociologist; and Kurt H. Wolff, sociologist. Some of the specific topics discussed at this conference were "Experiences and Prospects in the Use of Models in the Social Sciences," "Changes in Human Relationships and Individual Psychology," "Common-sense and Scientific Model Constructs of Human Action and the Concept of Rationality," and "A Survey of Mathematical Models in the Social Sciences." On June 18-19, the Project and the Social Science Research Council jointly sponsored a conference devoted to the "Theory of Organization." The purposes were to bring together a small number of relatively strategic scholars working on organization theory, to secure and review summary reports of research in progress, and to discuss a limited number of specially prepared papers bearing on major problems in the field of organizational behavior. The four sessions of the conference were built around the following themes: "Patterns of Behavior within Organizations," "Organizational Setting," "Decision-making" and "Theory and Current Research." Papers were presented by Floyd Mann, sociologist; Carroll L. Shartle, psychologist; E. Wight Bakke,

economist; Neil Chamberlain, economist; Harold Stein, political scientist; Herbert Simon, political scientist; Wilbert E. Moore, sociologist; Robert Dubin, sociologist; Melvin Copeland, economist, and Philip Selznick, sociologist. Members of the Organizational Behavior Project are: Wilbert E. Moore, director, sociologist; Richard C. Snyder, political scientist; Elliot G. Mishler, psychologist; James Hund, economist; Henry Bruck, political scientist; Burton Sapin, political scientist; Henry Garfinkle, sociologist; Gordon Turner, historian; Marion Levy, Jr., sociologist; E. O. Edwards, economist; and James Sykes, sociologist.

In cooperation with the Office of Naval Research, the National Research Council's Committee on Undersea Warfare has appointed an *ad hoc* Panel on Training under the chairmanship of Kinsley R. Smith of Pennsylvania State College. The other members of the Panel are Neil R. Bartlett, Hobart College; Lee J. Cronbach, University of Illinois; William H. Lichte, University of Missouri; Leonard C. Mead, Tufts College; and W. D. Neff, University of Chicago.

The Swiss Section of the New Education Fellowship (NEF) plans to hold an International Seminar for the Psychology of Children's Drawings at the Kuntstgewerbemuseum in Zürich, Switzerland, from the 4th to the 9th of October 1952. The purpose of this seminar will be to clarify and approximate study standards. Further, a considerable advancement in the psychology of children's drawings is to be anticipated.

Beside the Mayor of the City of Zürich and the Director of the Kuntstgewerbemuseum (Johannes Itten), the Institute for Applied Psychology, and the Swiss Association for the Individualpsychology have assumed patronage. The meeting will be carried out in seminar fashion on three successive days by various independent working groups, whereby, on the basis of pure psychological (i.e., diagnostic and therapeutic) treatment of a large exhibition of children's drawings the following questions will be discussed: (a) Are the causes of behavior problems detectable in children's drawings? (b) In which manner do the stages of personality development manifest themselves in children's drawings? (c) Drawing tests. (d) Mental hygiene by means of the child's drawings. (e) The child and color. There will also be opportunity in several

lectures (with discussion) to become acquainted with the latest research developments. Interested persons, including those who wish to contribute to the program from their own work, should communicate with the Secretariat, Mrs. Erena Adelson, Weitegasse 7, Zürich, Switzerland, where a program with the names of the lecturers will be available after July 5, 1952.

Call for Papers: Section I, AAAS. Section I (Psychology) of AAAS will meet on December 29-30 in St. Louis. Abstracts should be submitted to section secretary, Delos D. Wickens, 404 University Hall, The Ohio State University, Columbus 10, Ohio. They should not exceed 600 words excluding title and should include the author's job affiliation along with the name as he would like it to appear on the program. Papers may be submitted by persons who are not members of AAAS. The abstracts should be in the hands of the secretary not later than *September 15, 1952*.

The American Association on Mental Deficiency held its seventy-sixth annual meeting in Philadelphia on May 27-31, 1952. Several sessions on psychology were presented. Bertha M. Luckey is president of the Association this year.

The 1953 meeting of the Society of Experimental Psychologists will be held at the University of Texas, Austin, Texas, under the chairmanship of Harry Helson. The tentative dates for the meeting are March 30 and 31, 1953.

For the past several months George W. Kisker, associate professor of psychology in the Graduate School of Arts and Sciences at the University of Cincinnati, has been engaged in the project of making tape recordings of lectures and discussions by outstanding psychologists and psychiatrists in universities throughout the country. These tape recordings are now being made available to colleges and universities in every part of the world. The purpose of the project is to bring to every university the intellectual stimulation afforded by the great minds of our time. Through the recordings every college and university, no matter where it is located or what its facilities are, will be able to offer to its students the words and something of the personalities of the greatest living authorities in a number of fields. The tape-recorded lectures are filed in a library where they will remain until requested by another college or university. Re-

recordings are then made on tape, on standard 78 RPM phonograph records or on long-playing 33 $\frac{1}{3}$ RPM records, depending upon the equipment available at the school where the lectures are to be used. A recording studio has been established in Cincinnati to facilitate the production of tape and disc recordings, and to explore new techniques in the field of audio-education.

The Personnel and Guidance Journal is the new name of the journal formerly called *Occupations*. The first issue under the new name will appear in October.

The Society for the Study of Social Problems will hold its first annual convention at Atlantic City, September 3, 4, and 5 at the Ritz Carlton Hotel during the meetings of the American Sociological Society.

The American Society of Group Psychotherapy and Psychodrama held its tenth annual meeting in New York on May 16, 17, and 18. The papers read were representative of research and experience on a national and cross-disciplinary basis. A "model" constitution patterned after those now in use in other professional societies was accepted. Among other things, the constitution provides for rotation of offices and classification of membership (fellows, members, associates). Membership requirements are, generally, an MD or PhD (psychology, sociology or related fields) and a minimum of one year of experience in research or practice with group psychotherapy. Provision is made for meeting membership requirements on an experience basis. New members must have the sponsorship of at least two members in good standing. Serious students may apply for associate membership, but must obtain sponsorship of at least one member.

Officers of the society are J. L. Moreno, president; R. Dreikurs, president-elect; E. F. Borgatta, secretary-treasurer. The elected council of the society consists of twelve Fellows, with the fields of psychiatry, psychology, and sociology equally represented on the council. Persons interested in further information should communicate with E. F. Borgatta, Laboratory of Social Relations, Harvard University.

A new German journal, *Jahrbuch für Psychologie und Psychotherapie*, will publish its first issue in

September, 1952. At the request of the APA Committee on International Relations, a description of the journal and a subscription blank are being mailed to APA Fellows and Life Members. The publisher is Echter-Verlag, 13a Wurzburg. Orders may be placed through an agent.

The APA office has learned that undergraduate students and students of less than three years' standing may subscribe to the *Quarterly Journal of Experimental Psychology* at a special rate of 15 shillings per volume. Applications should be sent with remittance to The Editor, Quarterly Journal of Experimental Psychology, Psychological Laboratory, Downing Place, Cambridge, England. A statement should be included concerning the university department in which the applicant has worked, and what year he expects to graduate or did graduate.

A Summary of Statistics on the Selective Service College Qualifications Test has now been published by the Educational Testing Service. Because only a limited number of copies was produced, ETS is unable to satisfy extensive requests for copies. However, a copy of the report has been sent to approximately 125 libraries, including the library of each institution granting a PhD degree in education or psychology during the period 1939-1950, the libraries of state universities, and the public library in each of about 30 large cities.

United States Government grants under the Fulbright Act for lecturing or advanced research abroad. Applications for United States Government grants for the academic year 1953-54 for university lecturing and postdoctoral research under the Fulbright Act will be accepted until October 15, 1952, for Austria, Belgium and Luxembourg, Denmark, Egypt, France, Greece, Iraq, Italy, Japan, the Netherlands, Norway, Turkey, the United Kingdom and Colonial Dependencies, the Union of South Africa, and Pakistan. The Conference Board of Associated Research Councils of the Committee on International Exchange of Persons, has issued an announcement which lists the following lecturing awards in psychology and related fields:

Austria: Industrial and applied psychology. Universities of Vienna, Graz and Innsbruck.

Denmark: Psychiatry, with either of two following emphases: training of psychoanalysts or training of clinical psychologists. University of Aarhus.

Egypt: Educational psychology (psychology of learning and development, abnormal psychology, mental hygiene, measurement). Ibrahim University, Cairo.

Italy: Experimental psychology (specialist on electroencephalographic tests). University of Turin.

Japan: Experimental psychology. Tohoku University, Sendai. Behaviorist psychology. Kyoto University. Comparative psychology. Keio University, Tokyo.

Netherlands: Urban psychology. University of Amsterdam. Social psychology. University of Groningen.

Norway: Social psychology. University of Oslo.

Pakistan: General psychology or educational psychology. University of Dacca.

Requests for application forms and for detailed information regarding specific opportunities should be addressed to the Executive Secretary, Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, Washington 25, D. C.

The North Carolina Cerebral Palsy Hospital, Durham, has received a grant for two studies into the motivational processes of cerebral palsied children in relation to parental attitudes, motor performance, and progress in treatment. The research is jointly sponsored by the United Cerebral Palsy Association and the Durham Cerebral Palsy Foundation. Norman Garnezy, assistant professor of psychology at Duke University and psychological consultant to the hospital, will be chief investigator, assisted by Jesse G. Harris, Jr., and Lon Ussery.

The Social Science Research Center at Cornell University has recently established a group of graduate fellowships for students at Cornell. A \$50,000 fund, from a grant made to the Cornell University by the Ford Foundation, will be used for about twenty fellowships over a four-year period. The fellowship program is intended to aid exceptionally able students and to lead to increased research capacity in the behavioral sciences.

Social Science Research Council grants to psychologists. Faculty research fellowships have been awarded to John W. Atkinson for research on motivation and its measurement and to William K. Estes for the construction and testing of mathematical theories of behavior. Harold J. Breen, PhD candidate at the University of Western Ontario; James W. Carper, PhD candidate at The Johns

Hopkins University, and Donald E. Walker, PhD candidate at the University of Chicago, have received research training fellowships. A faculty research grant has been given to Hartwick College to help support the research of Paul M. Orso on the role of religion in marital and family adjustment.

The Public Health Service has recently awarded several research grants in areas of interest to psychologists. A list of the recipients of the grant and the titles of their projects follows:

- Harold A. Abramson. Psychological aspects of experimental asthma.
- M. B. Bender. Effect of cerebral lesions on visual perception.
- Bruno Bettelheim. Relation between therapy and staff selection, training, and administration in psychiatric institutions for children.
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PSYCHOLOGY AND THE NATIONAL SCIENCE FOUNDATION¹

JOHN T. WILSON

National Science Foundation

THERE may be some question as to whether "Psychology and the National Science Foundation" is as interesting a subject for discussion as would be "The Psychology of the National Science Foundation." The conditions surrounding the establishment of the Foundation, plus the current spate of interdisciplinary activity within psychology, might easily tempt one to contrive a rather fascinating theoretical piece on "The Rankian Concept of Birth Trauma as it Relates to the Behavior of an Organized Group." However, in the interest of conveying a somewhat more factual account of the present status of psychology in the National Science Foundation, we shall allay this temptation at least until such time as a more longitudinal analysis is possible.

The chronology of events preceding the establishment of the Foundation is known to at least a few psychologists, but it may be helpful to others if we review these briefly. Following prolonged legislative effort dating back to the days of World War II, the National Science Foundation was finally created by Congress in May of 1950 as an independent agency in the Executive Branch of the Federal Government (Public Law 507—81st Congress). The role that psychologists played in the early history of the Foundation has been noted previously (*Amer. Psychologist*, 1950, 5, 206), so we will not repeat it here. Subsequent to the passage of the bill, the President in late 1950 named a 24-member National Science Board which immediately started the work of organizing the Foundation's activities. The actual operation of NSF began in April of 1951. Since that time the Foundation gradually has been acquiring a staff, which has busied itself with the spadework necessary in carrying out the various programs which the Foundation may initiate and sponsor under its enabling legislation.

¹The statements contained herein are those of the author and should not be construed as reflecting the opinion of the National Science Foundation.

FUNCTIONS AND ORGANIZATION

The principal functions of the Foundation as authorized and directed by the NSF Act are as follows:

- (1) To develop and encourage the pursuit of a national policy for the promotion of basic research and education in the sciences;
- (2) To initiate and support basic scientific research in the mathematical, physical, medical, biological, engineering, and other sciences . . .
- (3) At the request of the Secretary of Defense, to initiate and support specific scientific research activities in connection with matters relating to the national defense . . .
- (4) To award . . . scholarships and graduate fellowships in the mathematical, physical, medical, biological, engineering, and other sciences;
- (5) To foster the interchange of scientific information among scientists in the U. S. and foreign countries;
- (6) To evaluate scientific research programs undertaken by agencies of the Federal Government, and to correlate the Foundation's scientific research programs with those undertaken by individuals and by public and private research groups;
- (7) To establish such special commissions as the Board may from time to time deem necessary . . .; and
- (8) To maintain a register of scientific and technical personnel. . . .

Numerous actions have been planned and undertaken by the Foundation in support of the rather broad charter defined by these functions. But before discussing the details of these, I should like to comment briefly on the Foundation's organization. In this regard, it should be noted that in large part, the existing organizational structure stems directly from specifications outlined in the National Science Foundation legislation.

"The Foundation," as defined in the Act, consists of "A National Science Board and a Director." The Board and the Director are appointed by the President, with the advice and consent of the Senate. As prescribed by the Act, Board members shall be "persons eminent in the fields of the basic sciences, medical science, engineering, agricultural, education, or public affairs, . . . selected on the basis of established records of distinguished service

. . . to provide representation of the views of scientific leaders in all areas of the nation."² President James B. Conant of Harvard University was named the first Chairman of the Board, and the incumbent, elected for a term of two years beginning in December of 1951, is Mr. Chester I. Barnard, past-president of the Rockefeller Foundation.

The Foundation's Director and chief executive officer is Dr. Alan T. Waterman, formerly Deputy Chief and Chief Scientist of the Office of Naval Research. The office of Deputy Director is held by Dr. C. E. Sunderlin, formerly Scientific Director of the London Office of the Office of Naval Research.

The various programs of the Foundation are administered by four Divisions, each headed by an Assistant Director of the Foundation as follows: (a) a Division of Mathematical, Physical, and Engineering Sciences, under the direction of Dr. Paul Klopsteg, on leave from Northwestern University Institute of Technology; (b) a Division of Biological Sciences, under the direction of Dr. John Field, currently on leave as Head of the Depart-

ment of Physiology at UCLA; (c) a Division of Medical Research, whose acting head is Dr. Field; (d) a Division of Scientific Personnel and Education, headed by Dr. Harry Kelly, formerly of the Office of Naval Research. Each Division encompasses several "program areas," responsibility for which is in the hands of a number of Program Directors who individually represent one of the several scientific disciplines under the cognizance of the Division. The Foundation Director's staff also includes a General Counsel, and an Assistant Director for Administration, the latter being responsible for such matters as exchange of scientific information, finance, and internal administration.

Under the terms of the Act there exists for each Division a "Divisional Committee," appointed by the National Science Board and consisting of a minimum of five persons (who may be members of the Board but under current practice are not). The function of each Divisional Committee is to advise and consult with the Board and with the Director regarding matters which relate to the programs and policies of its Division. In addition to its Committee each Division also maintains a roster of consultants from which *ad hoc* panels are formed as necessary, for the purpose of evaluating proposals which are being considered for support by the Foundation.

Within this organizational structure, psychology is one of some eight program areas under the Division of Biological Sciences. Other program areas in the Division include: genetics, biochemistry, microbiology, physiology, experimental botany, experimental zoology, and systematic biology. The advisory group for psychology consists of Drs. Frank Beach of Yale University; Lyle Lanier of Illinois; Donald Lindsley of UCLA; Donald Marquis of Michigan; and Quinn McNemar of Stanford. The program area covers "general experimental psychology," including measurement theory and research. However, in considering research proposals, the difficulty of rigidly delimiting any area of psychology is recognized and the merit of the research proposed is the primary consideration in determining whether or not it is recommended for support.

Social psychologists will be particularly interested in the absence within the present organizational structure of the Foundation of the whole domain of the Social Sciences. Within the Act, the specifications for the divisional structure of the Founda-

² The membership of the National Science Board is as follows: Sophie D. Aberle, Special Research Director, University of New Mexico; Robert P. Barnes, Head, Department of Chemistry, Howard University; Chester I. Barnard, Past-President, Rockefeller Foundation; Detlev W. Bronk, President, The Johns Hopkins University; James B. Conant, President, Harvard University; Gerty T. Cori, Professor of Biological Chemistry, School of Medicine, Washington University; John W. Davis, President, West Virginia State College; Charles Dollard, President, Carnegie Corp. of New York; Lee A. DuBridge, President, California Institute of Technology; Edwin B. Fred, President, University of Wisconsin; Paul M. Gross, Vice President and Dean of the Graduate School of Arts and Sciences, Duke University; George D. Humphrey, President, The University of Wyoming; O. W. Hyman, Dean of Medical School and Vice President, University of Tennessee; Robert F. Loeb, Bard Professor of Medicine, College of Physicians and Surgeons, Columbia University; Donald H. McLaughlin, President, Homestake Mining Co.; George W. Merck, President, Merck & Company; Frederick A. Middlebush, President, University of Missouri; Joseph C. Morris, Head of Physics Department and Vice President, Tulane University; Harold Marston Morse, Professor of Mathematics, The Institute for Advanced Study; Andrey A. Potter, Dean of Engineering, Purdue University; James A. Reyniers, Director, LOBUND Institute, University of Notre Dame; Elvin C. Stakman, Chief, Division of Plant Pathology and Botany, University of Minnesota; Earl P. Stevenson, President, Arthur D. Little, Inc.; Patrick H. Yancey, S.J., Prof. of Biology, Spring Hill College; Alan T. Waterman, *ex officio*.

tion include the Divisions described above, and as a sort of tagline state that "there shall also be within the Foundation such other divisions as the Board may, from time to time deem necessary." One may note, in addition, that the second function listed above contains the phrase, "and other sciences," which makes room for the eventual inclusion of Social Science within the programs of the Foundation. In support of these two possible openings in the Act itself, the legislative history indicates rather clearly that the phrase "and other sciences" was intended to enable the Foundation to support work in the Social Sciences at such time as it deemed desirable and propitious.

OPERATIONS OF THE FOUNDATION

The functions of the Foundation as listed above may be grouped into three general categories: (a) those having to do with the problem of scientific manpower, including scholarship and fellowship programs, (functions 4 and 8); (b) those having to do with the initiation and support of basic research in various domains of science (functions 2, 3, and 5); and (c) those having to do with the development of a national policy for the promotion of basic research and education in the sciences, including the evaluation of the Federal Government's own programs of research (functions 1 and 6). The 7th function is not a function in the same sense as the others, but merely indicates a possible technique for the prosecution of any of the others.

With reference to the functions in the scientific manpower category, these are administered by the Division of Scientific Personnel and Education. A significant beginning step in their support has been taken, with the initiation of the Foundation's fellowship program. For the academic year 1952-53, 624 National Science Foundation fellowships were awarded. This number includes 569 at the predoctoral level, and 55 at the postdoctoral, selected from about 3,000 applicants. Predoctoral applicants were required to take examinations in their specific fields, under a testing program administered by the Educational Testing Service, Princeton, New Jersey. Test scores, academic records, and recommendations regarding each candidate's abilities then were considered by panels of scientists in the respective fields of the candidates. This part of the selection procedure was administered by the National Research Council, under contract with the Foundation, following which Fellows were

finally selected by the Foundation. Postdoctoral applicants were not required to take examinations but their records and recommendations were screened by NRC panels, prior to final selection by the Foundation.

Five predoctoral and four postdoctoral fellowships were awarded in psychology. While this number may seem small in proportion to the total number of awards made, it represents more than a fair percentage as compared with other fields, in terms of the number of applications filed. The Foundation plans to continue its fellowship program in the coming year primarily on the predoctoral level, and will continue to make awards in the field of psychology.

Functions relating to basic research are supported by the programs of the Physical Sciences, Biological Sciences, and Medical Research Divisions. In this respect the Foundation, within the scope of its legislation, enjoys a substantial amount of freedom in the choice of means by which it supports research. Such support may be for a variety of purposes, including: the execution of research; field trips; development or purchase of instruments or equipment; modifications of laboratories or other facilities; training of personnel; abstracting, translating, or publishing scientific information; organization and administration of colloquia or symposia; foreign travel to scientific congresses or meetings; surveys of the national scientific potential; or promotion of research by organizations or groups not actually doing it, as for instance, the Pacific Science Board.

Because of the scope of its objectives, the Foundation will probably find it desirable to provide assistance from time to time for all of the above purposes. To date, however, such assistance has been primarily for the conduct of research on individual projects; for foreign travel; for organization of symposia; and for surveys of scientific potential in specific fields.

A word might be said here regarding the major steps in the selection of a research proposal to be supported by the Foundation. Normally, a proposal for a research project is initiated by the scientist who wishes to do the research. The proposal is forwarded to the Foundation, with the endorsement of the department head and an administrative officer of the institution. Upon receipt in the Foundation, the appropriate Program Director determines initially whether the proposal has a suffi-

cient degree of scientific merit to warrant consideration by an advisory panel, and whether it is within the scope of the NSF program and the budget of the Division. If the proposal meets these criteria, it is then reviewed by a panel of scientific consultants for its scientific merit, relation to contemporary research, unnecessary duplication of effort, the scientific ability and resources of the research staff, and reasonableness of the budget. Assuming recommendation for support by the panel, the proposal is considered by the Foundation staff, in the light of program balance, geographical distribution, legality, and relation to the national basic research effort. Proposals passing all of these hurdles are then presented for approval to the National Science Board, prior to final action by the Director, who makes the grant to the institution. In its grant program, the Foundation has a special interest in broadening the bases of research, and is giving particular consideration to proposals from promising younger men, and to proposals from smaller institutions that offer the promise of becoming new nuclei of research activities.

As of the end of fiscal 1952 (June 30, 1952), the Foundation had awarded approximately a hundred research grants (two-thirds of which were in Biological Sciences), out of some six hundred and fifty applications. These included, in psychology, a grant in the area of theoretical psychology to Indiana University for research on "Mathematical Models for Behavior Data" under the direction of W. K. Estes and C. J. Burke; and another, in comparative psychology, to Kansas State College for research on "Behavior Patterns of Solitary Hymenoptera," under the direction of H. E. Evans.

In addition to grants for the direct support of research, the Foundation's program includes foreign travel grants to scientists for the purpose of participation in scientific meetings abroad. In the last fiscal year such awards were made in the Biological Sciences to nineteen biochemists to enable them to attend the Second International Congress of Biochemistry, in Paris. In keeping with a policy of encouraging support for young scientists, eight of the biochemistry travel grants were awarded to young biochemists. The remaining eleven were made to senior biochemists, on the basis of their past contribution to research in biochemistry. One other form of research support has been utilized by the Biological Sciences Division, in underwriting a Committee on Photobiology, in co-

operation with the Division of Biology and Agriculture of the NRC, for the purpose of conducting a series of symposia on problems of photosynthesis.

Turning to the third group of functions—those having to do with the development of a national policy for the promotion of basic research and education in the sciences—it is in regard to these that the National Science Foundation can probably make its greatest and most unique contribution to the issue of science and the Federal Government. Support of these functions obviously cuts across divisional structure and involves the Foundation as a whole.

The problem of developing a national science policy has an important historical perspective. Toward the close of the war, when a National Science Foundation was first being considered, there was a widely felt need both in science and in government for a responsible government agency to take on the tasks of surveying the nation's scientific research efforts, of locating the gaps or areas of underdevelopment resulting from the rush of research and development activities of World War II, and of being responsible for actions which would ultimately lead to the best possible recommendations regarding the role of the Federal Government in the support of science. With continued failure over a period of several years to establish a National Science Foundation, a void was created with reference to a systematic national policy, particularly in regard to basic research support. In the meantime, a series of legislative acts established several government agencies such as the Office of Naval Research, Atomic Energy Commission, and the various National Institutes of Health, whose functions include the support of research. The passage of such legislation filled the research policy void in Topsy-like fashion, with a welter of uncoordinated and at times divergent policies relating to research support by the Federal Government. This has made it more desirable than ever, that a systematic policy with respect to the government's role in the support of research be developed. It is within this frame of reference that the President, in his 1953 Budget Message, stated that:

The National Science Foundation has been established as the government agency responsible for a continuing analysis of the whole national endeavor in basic research, including evaluation of the research programs of other federal agencies. . . . The Foundation will formulate a broad national policy designed to assure that the scope and quality

of basic research in this country are adequate for national security and technological progress.

The development and formulation of a national science policy obviously will take a great deal of time and effort. Questions which must be answered in developing such policy include those having to do with the total financial support now being provided for scientific research; the distribution of this support among governmental, industrial, and educational institutions; the most desirable distribution from these major sources; the division of research effort among the various sciences; the present and future need for scientific manpower; the impact of government support of research on the educational process and on the financial stability of universities and colleges.

As has been pointed out by the Foundation's Director:

Success in developing national science policy, in finding the most likely avenues of progress in science, in assessing our research needs, and in overall analysis of our present research activity will depend in the first instance on scientists themselves. No one else has their intimate knowledge of what science is and should be doing, or their understanding and insight into the nature and problems of research (*Science*, 1952, 115, 2988).

Consequently, the Foundation is leaning heavily in its policy development program upon the help to be obtained from individual scientists and from scientific groups. In addition to utilizing the skills and judgments of its Divisional Committees and its consultants, and such information as is developed through its research support programs, the Foundation is sponsoring a series of documentary "survey-inventories" of specific fields of science as a means of furthering its policy-formulating program. The purpose of these studies is to determine, among other things, the status of research in the field, the availability of trained manpower, the nature of the field's institutional and communication problems, and the amount of and results from interaction of the field in question, with other scientific domains. Through such surveys it is felt that the kinds of information and judgments needed in formulating a meaningful policy for the Federal Government's support of research will be obtained. One such project has been initiated with the American Physiological Society, under a contract with the National Science Foundation, for the purpose of determining the present status of affairs in reference to the field of physiological science. The

study is under the supervision of a committee of the Society, and the day-to-day direction of the work is being handled by a full-time executive director and his staff.

With respect to national science policy, psychology as a science will necessarily be considered by the Foundation. In this regard, there is currently under discussion, between the Foundation and the Policy and Planning Board of the APA, plans for a survey of psychology, analogous to that being made by the American Physiological Society. Factors motivating this discussion include the Foundation's interest in the support of psychology as science, and the interest of the Policy and Planning Board as reflected in the 1948 and 1951 reports of the Board.

DISCUSSION

So much for a description of the organization and the programs of the Foundation. However modest the progress in these two respects may appear to be, the most important factor is that there exists, within the Federal Government, a highly placed agency, authorized and directed to support basic scientific research, and to establish a national policy for research and education in the sciences. The importance of science in national affairs has been given a recognition never before achieved, and it should be of particular significance to psychologists that their science has a place in this scheme of things.

To convey a better understanding of the progress of the Foundation during its formative stages, and to enhance the recognition of the role that can be played most effectively by individual psychologists in support of the Foundation and its activities, I should like to discuss certain problems which confront the Foundation, over and above those relating to organization and programming.

In terms of its appropriations, the Foundation has been in a chronic state of difficulty ever since its inception. In fiscal 1952, for example, the total appropriation by the Congress amounted to only three and one-half million dollars, as compared to fourteen millions requested. In the current fiscal year it totals only four and three-quarters million dollars, as contrasted to fifteen millions which were budgeted.^a Such curtailed appropriations have had

^a Contrast the Bush report (Bush, V. *Science the Endless Frontier*, July, 1945) which, in initiating the idea for a national science foundation, called for an annual budget of

an important effect upon the rate of growth and development of the Foundation's programs.

The varied roles which the Foundation by its enabling legislation is capable of playing create another sort of problem, particularly during the first year or two of operation. On the one hand, scientists generally feel that the primary function of the Foundation is to further fundamental scientific research. On the other hand, those responsible for appropriations and budgets have upon occasion (*Congressional Record*, March 21, 1952, Vol. 98, No. 47; "Resources for Freedom," The President's Materials Policy Commission, Vol. I, June, 1952, p. 144) indicated that, to them, the Foundation's primary functions are the development of a national science policy and the evaluation of research programs currently under way in the numerous research-supporting agencies of the Federal Government. The question as to which of its several roles the Foundation can best assume or emphasize at this stage of its development is a serious and difficult one to answer.

There is another question in the minds of many scientists who have previously benefited from the research support programs of other government agencies: Is the NSF going to become the primary agency for the support of uncommitted basic research? Ostensibly the reply to this question is "yes," but with its limited budget, the Foundation has been, to some extent, "all dressed up with no place to go." The strongest evidence to support an affirmative answer is the very existence of the Foundation. In addition, the President, in his 1953 budget message, has reiterated that the Foundation shall ultimately become the principal agency through which the Federal Government gives support to "general purpose" fundamental research.

122.5 million. The President's Scientific Research Board (*Science and Public Policy*, Aug., 1947) stated that 250 million dollars would be a more suitable figure.

Other federal agencies are to be responsible for the support of basic research which is related to their missions. In the meantime, the important consideration is that in passing the responsibility for general basic research from other agencies to the Foundation, care must be taken to see that such research programs do not end up with too little support.

A question of importance to the large portion of the psychological profession whose interests lie in the direction of Social Science is the eventual place of Social Science in the program of the Foundation. Those psychologists who have been associated with the Human Relations programs of the Department of Defense are aware of both the real and imagined difficulties in gaining support for Social Science research within agencies of the Federal Government, even when it is directed toward problems of morale and leadership. In the face of such experience, social scientists unquestionably will watch with interest the Foundation's activity with respect to the support of research in their fields.

Such are some of the issues and problems facing the Foundation, which, along with those matters relating to organization and programming, should be of concern to psychologists. Despite the limitations of the Foundation's program with reference to Social Science, there are currently available research grant opportunities and fellowship opportunities for psychologists. Second, whatever the direct benefits may become in the future, the Foundation is of importance indirectly, because of its general roles affecting all scientific disciplines. It is particularly in this respect that psychologists, along with their colleagues in other fields of science, have a real stake in the Foundation. What this stake eventually amounts to will depend ultimately on the efforts of all of us.

Manuscript received July 15, 1952

TEACHING PSYCHOLOGY ON TELEVISION

W. J. McKEACHIE

University of Michigan

RECENT surveys suggest that, in terms of television set ownership, psychologists and their professional brethren lag far behind the general population. But even though psychologists and their families are not generally enthusiastic television viewers, it seems probable that more and more psychologists will be called upon to be viewed on television screens. Already Professor Stromberg of Western Reserve is teaching a general psychology course for college credit and Johns Hopkins University has had experience in the field. Hence, my experiences in teaching a general psychology course by television may be of interest to other prospective competitors of Hopalong Cassidy.

The University of Michigan began in the fall of 1950 to cooperate with the *Detroit News* station WWJ-TV in producing a weekly one-hour television program. The program consists of three twenty-minute segments:

1. A unit of a 15-week course comparable to a traditional campus course, such as "Human Biology,"
2. A unit of a 7-week course of a more popular nature such as "Retailing," or "Photography," or "Understanding the Child,"¹
3. A feature on some aspect of the University such as a glee club concert or a visit to the synchrotron.

Students may enroll in either the 7-week or 15-week courses and receive supplementary written materials. If they return a completed copy of the course examination they receive a certificate of participation in the course.

In the fall of 1951 I was asked to organize and teach a 15-week telecourse titled "Man in His World—Human Behavior." Since I had never before appeared on television and do not own a television set, I had little conception of what I was getting into. Fortunately, the University's tele-

vision department,² and the WWJ-TV director, Walt Koste, already had a year's experience in putting on this type of program so that most of my trial-and-error learning took place off the television screen. The routine of preparing a lesson ran something like this:

Three weeks before program—Outline the lesson to two honors students in psychology who wrote most of the supplementary reading material. This material was mailed to the 700 students who registered in the telecourse.

Two and a half weeks before lesson—Edit supplementary materials.

Monday before lesson—Meeting with TV staff to outline lesson and discuss visual aids.

Wednesday—Rehearsal to check organization, clarity, and rough timing.

Friday—Rehearsal to get better timing, more clarity.

Sunday—In WWJ-TV studios in Detroit.

9:00—Rehearsal to get camera movements.

10:30—Be on set to adjust lighting.

11:00—Final rehearsal of entire program with cameras and lights.

1:00—On the air with over 100,000 people watching! (Audience surveys indicated an audience of 100,000 to 150,000.)

THE GOALS AND CONTENT OF THE COURSE

I happen to be one of those who feels strongly that the layman needs to gain a greater understanding of science and its values. As a psychologist, I'm particularly concerned that the public accept human behavior and experience as a legitimate area of scientific investigation. Finally, I think that knowledge of psychological principles and "best guesses" can be of interest and use to almost everyone. Thus I had two major goals for my viewers: (a) to value science and (b) to develop an interest in, and under-

² Garnet Garrison, Producer; Hazen Schumacher, Supervisor of Production; and Robert Newman, Script Editor.

¹ Taught by Professor Willard Olson.

standing of, human behavior. Because I wanted to give the layman some idea of the scope of psychology (and perhaps because I was lazy), I deliberately chose to model the course after my general psychology course on campus. The sequence of lessons was as follows:

1. Determinants of Behavior.
2. The Scientific Approach to Behavior—Guest, Donald G. Marquis.
3. The Cultural Background of Personality—Instructor, R. W. Heyns.
4. The Biological Background—Guest, N. R. F. Maier.
5. Abilities.
6. Perception.
7. Thinking.
8. Motives.
9. Learning (Habits)—Instructor, E. L. Walker.
10. Conflict, Frustration, and Defense Mechanisms.
11. Mental Illness and Mental Health.
12. The Structure of Personality.
13. The Development of Personality.
14. Interpersonal Relations—Instructor, E. Lowell Kelly.
15. The Individual in Society.

Basically, I attempted to direct my students' thinking to the age-old problem of "What Is the Nature of Man." We started by looking at the person, then studied specific variables within the person determining behavior, and finally considered the whole person again. This sequence permitted easy integration and audience surveys showed that a relatively large proportion of our audience attempted to follow the course from beginning to end.

Obviously, none of these topics could be covered in detail in twenty minutes, so that selection of materials was a major problem, as it is in most teaching. In most lessons I tried to organize the material around three or four major points. However, in the television lessons I couldn't refer back from one point to another by a word. I always had to remember that part of my audience might have tuned in late and might be asking, "What does he mean by 'perception'?" I expect to carry back to the classroom some of this emphasis upon repetition and rephrasing, for I suspect that my college students, too, may not always be "tuned in" to my lectures.

One of the biggest problems I faced in trying to pack psychology into twenty-minute capsules was that of presenting the material in a way which would be scientifically sound, yet interesting and useful to my audience. In the limited time available it was impossible to give conflicting psychological points of view or even to include many of our conventional hedges, such as: "it is probable," "in a rather inadequately controlled experiment, Prof. X found," or "Prof. A found such-and-such, but his results have not been confirmed." I was particularly concerned about the lesson on "Mental Illness," since I not only had to consider the viewpoints of professional workers in the field, but the probability that out of over 100,000 viewers, someone would be threatened by almost any symptom I described. In this lesson, as in all others, my colleagues in the psychology department were very helpful in reading my notes and suggesting ways of wording the material to reduce anxiety. Using my own behavior as an example of certain defense mechanisms was one of the techniques we used.

The importance of academic freedom had been demonstrated by the success of an earlier course in "Human Biology," taught by Professor Karl Lagler. Thus, while I didn't joke about sex, I was free to discuss it and any other touchy topics which were necessary to the course.

I was also surprised to find that technical terms were not frowned upon. However, my directors did insist upon clear explanations, and I often discovered that a term which I had used very glibly was not so clear in my mind that I could define it or explain it in any coherent fashion. While we avoided fancy words if plain ones would do, we worked on the assumption that one of the student's indices of achievement is the addition of new words to his vocabulary. Hence we by no means avoided using, and defining, new terms.

TELEVISION TEACHING TECHNIQUES

To me, the outstanding feature of television as an educational medium is that while one is teaching a large number of students each one of the students is seated just across the instructor's desk. Demonstrations which would be unusable in large lectures can be brought directly before the student's eyes.

However, television also imposes limitations. Broad, sweeping gestures, vigorous floor pacing, little mannerisms, are mercilessly magnified by tele-

vision. Most of the time my working space was less than 10 feet square. If I stepped a few feet out of position, the camera exposed unused backdrops, tangles of wires, and extra props.

In most lessons, after a review of previous lessons I began with an everyday problem which I related to the psychologist's conception of the topic of the lesson. In answering these questions I tried to give prominence to experimental results even though I usually did not describe experiments in detail. I concluded each lesson with a summary, and frequently pointed out a practical implication of the principles discussed.

A major portion of each lesson was spent in lecturing, but whenever possible visual aids were exploited. We used dramatic scenes with actors recruited from the speech department, role playing, interviews, films, posters, three-dimensional models, flip cards, photographs, and blackboard.

Probably our most successful teaching device was a two- or three-minute scene which we called a "Behavior Drama." These were interpersonal incidents in family life, at work, or in a social group which involved two or three people. Our script writer, Robert Newman, possessed not only a fertile imagination but also a good knowledge of psychology. Usually, all I had to do was to indicate the points I wanted brought out, and he would devise a scene which was not only educational but of much interest to our viewers. One of the features of our "Behavior Dramas" was that we could stop the action or later in the lesson refer back to a specific incident and get not only the spoken words but the unspoken thoughts or even the unconscious feelings behind the thoughts. These unspoken words were on records which were played through a filter. Often we used these as a dramatist would use soliloquies.

We also tried an unrehearsed role-playing scene. The scene I used was one which I had used many times in my classes and illustrated my point well, but seemed to have few advantages over our rehearsed dramas. Its disadvantages were that all of the production personnel as well as the role players suffered a good deal of anxiety. With the necessity for exact timing, the careful planning of camera patterns, and the terrific stress which the television director must undergo even in a well-rehearsed program, role playing seemed like too much of a risk. However, I still think that with experienced role players and an experienced teacher,

role playing could be a more suspenseful and more lifelike teaching device than scripted dramas. The necessity for careful planning and smooth development of ideas was also an argument against unrehearsed discussions or question-and-answer periods, which we considered as teaching techniques.

We did use interviews with much success. During the course I interviewed Donald Marquis, Norman Maier, and Dr. Maier's identical twin sons, Jack and Charles. If both interviewer and the interviewee are to appear on camera, they must stand uncomfortably close together. In answering a question the interviewee is frequently visibly torn by the conflict between looking at the camera and looking at the interviewer. I tried to reduce this conflict by asking "Would you tell *our students* how . . . ?" We found that while we planned the general pattern of questions to be asked in the interview, the viewers like the spontaneity of interruptions, incomplete sentences, and requests for clarification.

Films seem like naturals for television, and I should have liked to use more of them. However, I had to make my points as quickly and clearly as possible. It's amazing how difficult it is to find a scene from a film which will clearly illustrate a given principle. Even in those cases where I knew of such films, we felt that the impact would be greater if we could do it "alive." Thus the only film I used was an excerpt from the Kellogg "Ape and Child" series. It was very popular with our viewers.

Posters, models, flip cards, etc., were our stock in trade. The principles of construction of such aids are already well known, but many were new to me. I especially enjoyed using pull cards. Ours included such simple things as "Behavior = Person \times Situation." The "Person" pulled out to reveal "Perception," "Motives," "Abilities," "Thinking," "Habits." Another card with three pulls showed a man. One pull revealed "Threat" and two pulls changed the expression of the man's face and revealed the word "Anxiety." In these as in other cards, the drawing appeared rather crude and overdone to the naked eye, but fine shadings simply don't show up on the television screen. Similarly we had to learn to avoid putting too many things on one card.

In using the pad which served as a blackboard, I had to break one of my classroom habits. In the classroom, I refrain from speaking while my back

is to the class; on television the microphone followed my movements so that I could speak at any time. To save time, I often wrote the concepts I planned to emphasize before going on the air, and simply underlined them as I spoke rather than writing them out.

WHEN YOU APPEAR ON TV

One o'clock approaches. The floor manager shouts "Places!", and you step out under the bright, hot lights. You're probably dressed in a light blue shirt, a gray flannel or dark blue suit, and a plain or striped tie. (Starched white shirts, patterned suits, and figured ties are apt to make odd light patterns on the TV screen.)

"Two minutes."

"One minute."

"Quiet, please."

The announcer introduces you, and you watch the monitor TV set to see the title card with the name of today's lesson. Then the floor director brings his index finger down pointing to you, and you're on. In front of you are at least two cameras which move back and forth, in and out, varying camera angles, and preparing for the next visual aid to be used. A red light (on one of the cameras) indicates that this is the camera whose picture is being used. As you look into the lens, you appear to the viewer to be looking directly at him. Just above and in front of your head is the microphone

on a boom. It will move as you move. Between the two cameras is the floor manager wearing ear-phones so that he can signal to you anything which the director, who is in the control room, thinks you need to know. During the show the floor manager points from one camera to the other as the shots shift. He also gives time signals—a rotary motion of the hand to speed up; a taffy pulling motion of both hands to indicate "stretch it out"; "two minutes to go"; "one minute more"; and a clenched fist for "finish up!"

Beside the cameras stands someone holding your notes written in large black letters on large sheets of paper. You will be able to glance at them just as you glance at your lecture notes in the classroom, and just as in the classroom you may skip, add, and reorganize as you go, so long as you remember that you must not vary more than a few seconds in your timing.

Just a few feet to either side of you stand stagehands who will pull your pull cards, set up and remove your models, and hand you the pen for writing on the pad when you discover that you've forgotten it.

Seated on a sofa behind you are the actors whom you'll introduce as you set the scene for today's "Behavior Drama."

You're on TV!

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COLLEGE CREDIT FOR TELEVISION HOME STUDY

ELEROY L. STROMBERG

Western Reserve University

WESTERN Reserve University has been experimenting with television education since the telecast channels in Cleveland, Ohio were first opened. The early programs were most important for they demonstrated the need for carefully evaluating the kind of program which might best represent the University as an agent of community service and also as a source of formal higher education.

The pattern was soon resolved into two kinds of programs. One of these was an informative program concerned with important service functions of the University, worthy community activities, current issues of local importance, and the dramatic portrayal of social problems. The second type of program took the form of classroom teaching. Short courses in economics, foreign languages, etc. were presented from the studio, some with students present and some with the lecturer only being viewed.

In the spring of 1951 the Television and Radio Committee of the University requested me to present to them an outline for a 13-week course in Introductory Psychology which might be presented in three half-hour periods per week and for which the viewer might register for college credit. This outline was cleared by the University Curriculum Committee although some questions were raised about the advisability of granting three semester hours of credit for 19½ hours of classroom lecture. These questions are at least partially answered later in this paper. The requirements for credit involved the regular registration at \$16.00 per credit hour, which included the syllabus and home study workbook. Nine assignments from the workbook (including 24 chapter assignments) were to be mailed in during the course. The tenth assignment was a 1,500-word paper on "How my study of general psychology will help me in my daily living." During the final week of the semester all credit students presented themselves for a written final examination on all work covered.

The course began in September 1951, at the opening of the fall semester. The 13 weeks represent

the regular quarter in the studio calendar. The final examination occurred 16 weeks after the lectures began. This adjustment to a commercial studio's schedule is one of the difficulties we faced. In this instance it was a minor difficulty. In our subsequent course the studio quarter did not coincide in any way with the university calendar and several problems arose.

The course in introductory psychology was presented over Cleveland's station WEWS, which provided the University with time from 9:00 A.M. to 9:30 A.M. five days a week. Psychology (1) occupied the Monday-Wednesday-Friday hour and Comparative Literature (2), a two-hour course, was presented on Tuesday and Thursday. The 39 lectures in psychology were equally divided between Mr. Richard Wallen (3), Mr. Peter Hampton, and myself. Thus, each of us could present those topics about which he preferred to lecture.

In reading Professor McKeachie's report about the Michigan program I am impressed by the work which has gone into his twenty-minute, once-a-week program. If we had spent a comparable amount of time we would have been overwhelmed by our task. Perhaps Professor McKeachie will think we have not put enough effort into our course. I have seen the detailed script for his program and I am grateful to our director for making it possible to present the program as we did.

I would like to describe our procedure briefly and to give credit to the chairman of the University department of dramatic art, Professor Barclay Leatham, for making our work successful. Mr. Leatham met regularly once a week with the instructors involved to discuss techniques and problems. At the meetings he stated and restated his feeling that as director of the program he was playing the part of a leech upon talent. He said "You give the lecture in the best way you can and I'll give the viewers the opportunity to see you at your best." He "cut" all the programs and from his reports on the difficulties he encountered we tried to make our next program better.

So it was that no program in our series of 39 was formally rehearsed. We arrived at the studio about 8:30 A.M., bringing with us such visual aids material as we might need. We used slides, flip cards, pictures, films, published graphs and tables, and such apparatus as might photograph well. We then presented Mr. Leatham with a time schedule describing the materials to be used at certain times during the lecture. We were not expected to meet that schedule to the minute since it was at best an approximation. By 8:45 our set was in place, and we placed on the blackboard whatever information we wished.

A word about our set might be appropriate. It consists of a large window in the background flat through which a greatly enlarged photograph of one of the University buildings can be seen. The two diagonal wings are fitted with hangers permitting the placing of a blackboard on each, or the use of a bookcase or charts, maps, etc., interchangeably. A small desk and a chair complete the lecture area.

We had used the first edition of Munn's *Psychology* in our regular credit courses since 1946. This fall we were using another text in the regular course and so chose Munn's second edition for the telecourse student. This book was supported by Valentine and Wickens' *Experimental Foundations of General Psychology*. The Johnson and Munn *Workbook* was used for the home study work. The section containing answers to the test questions was removed before the workbook was sent to the student. This procedure posed some difficult problems, for the students thought they should be entitled to the full contents of a book which they had purchased. However, since this workbook was included in the regular tuition cost as a part of the home study assignments we felt we could use the material as we wished. We were also sure that no other college in this area was using the revised Munn text.

When registration was complete, 66 students had registered for the 3 semester hours of credit which cost \$48.00. The two textbooks were not included in this fee but were available by mail from the University. An additional 472 had registered as auditors and paid a five-dollar fee for which they received the syllabus and workbook. Many of the auditors also purchased the two textbooks.

These credit students and auditors were found in a geographic area beginning at the western end of Lake Erie, and extending south into Ohio about 70

miles and eastward into the western part of Pennsylvania. No estimate could be made of the non-registered viewers outside of Cleveland but various tabulations indicate that about 70,000 persons within the Cleveland sampling area participated regularly in the sessions.

Several of the credit students, 13 in number, found it desirable during the first weeks of the course to cancel their credit registration. They were permitted to change from credit to auditor status if they wished. Of the remaining 53 students, 10 failed to complete the course, 10 asked for additional time to complete the written work and 35 presented themselves for the final examination. This is 66 per cent of those who had not formally dropped the course. If those whose work is now incomplete should finish it within the University limits (one semester) 81 per cent will have completed the work. Recent information from a midwestern university which takes great pride in its home study courses indicates that between 20 and 30 per cent of their correspondence students complete the work and receive credit. It appears that the telecourse not only stimulates home study students to complete the work but also provides substantial course material for those who have no desire to receive credit for their participation.

During the years that we had used the first edition of Munn's text we had prepared several alternative standardized examinations covering the course as offered in multiple sections by several instructors. We chose one of these, a test of 110 multiple choice items, for the final examination. As previously given to about 1,200 students the range of scores was from 31 to 95 with a median score of 54. For the telecourse students the range was from 35 to 95 with a median score of 68. There has undoubtedly been some selection in the telecourse group which eliminated the less capable before the examination, but it is apparent that those who receive credit by television home study have achieved as much as the regular students who, it is assumed, have a much greater opportunity to learn and have a closer tie with the instructor.

We have also been amazed at the splendid term papers some of these students have written. Even though the age range was from 19 to over 50, and although some had not been in school for over 30 years, the papers were stimulating, thoughtful, and often refreshing.

A word should be said about the nonregistered

students. Countless letters have come in commending us on our effort and asking that the University continue to offer more courses. I have met many people who listen and view us regularly and I believe their favorable comments are sincere. Study clubs have been organized among housewives to study cooperatively with us. Elderly men and women in their retirement have told us how much it means to them to be able to study and to enter new unexplored areas of science.

Even though our course was designed for the credit student and was not adulterated at all, the noncredit viewers have been pleased with its detail, its soundness, its applicability, and its challenge. I would suggest that others who plan to present psychology over television make certain that they do not underestimate their audience. We do not need to water our stock. There are already too many nonprofessional people who wish to capitalize on our subject matter by popularizing it, until I fear that it will lose much of its value. The audience for sound discussion of scientific psychology is limited only by the hours available for the telecast and the range of the station.

I believe that the success of our course, using only the teaching methods we ordinarily use in the classroom, is due in a large measure to four things; (a) the careful choice of instructors who can make the subject matter live, and I say this modestly for my colleagues gave the course that special flavor, (b) the unwillingness to compromise on any of the subject matter in order to make it seem like a new-found magic, (c) the straightforward approach without staged drama or other practices not ordi-

narily found in the classroom, (d) the philosophy of Mr. Leatham who believes that television in education must be adapted to the professor and not the professor to the television medium.

We believe that what we are doing is educationally sound and we are currently presenting a three-semester-hour credit course in child psychology. This course has introductory psychology as a prerequisite. Despite its beginning during the Christmas holidays and the prerequisite, it has 30 credit students and a large noncredit audience. Western Reserve University also believes the telecourse is sound educationally and is currently offering a three-circuit course in physical geography and presented two additional credit courses beginning last March. We have only scratched the surface for we believe that education is a continuing process which should be a part of every adult's life. These people are hungry for educational programs prepared for adults, and will make every effort to read, view, and understand the subject matter. The television medium appears to have been invented for educational purposes. I hope the story of our small success will stimulate others to take advantage of this unique opportunity.

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A FOLLOW-UP OF UNDERGRADUATE PSYCHOLOGY MAJORS

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THE rapidly increasing number of psychologists in recent years have focused attention upon prospective candidates for admission into the field. Generally such interest has centered upon graduate students and little attention has been paid to the undergraduate level. This attitude seems to reflect a serious oversight since it is the undergraduate population from which the graduate schools must recruit their trainees.

The writer, impressed by the large number of undergraduate students majoring in psychology at New York University and by a "Notes and News" item in the January 1950 issue of the *American Psychologist* (p. 26) which ranked New York University as the second leading undergraduate producer of the 1949 crop of PhD's in psychology, investigated the trends in registration of the 1939-1949 psychology majors and minors in Washington Square College (one of the four colleges within New York University which have undergraduate psychology departments). That study (1) revealed a rise in the proportion of psychology majors from 3 per cent of the 1939 graduating class to 13 per cent of the 1949 graduating class, with an increase in absolute numbers from 19 in 1939 to 197 in 1949. Then, in order to determine how many of these undergraduates actually continued on to professional status, a follow-up study was conducted, the results of which are recorded in this paper.

A postcard questionnaire was mailed with a covering letter to the 680 students who graduated from Washington Square College as psychology majors during the years 1939-1949, inclusive. The questionnaire called for information concerning graduate studies, nature of vocational experience, whether current job is related to the field of psychology, current salary, and reasons for selection of an undergraduate major in psychology. A blank space was provided for spontaneous remarks.

Of the 680 graduates (332 men and 348 women), 232 responded (139 men and 93 women) or 34 per

cent of the total. The balance of this paper is confined to a study of the group of respondents.

As can be seen from Table 1, 44 per cent of the persons answering the questionnaire (54 per cent of the men, 30 per cent of the women) have at some time in the past pursued graduate studies in psychology, or are currently doing so; 24 per cent (27 per cent of the men, 18 per cent of the women) were in other graduate studies; and 32 per cent (19 per cent of the men, 52 per cent of the women) have had no graduate study at all. The preponderance of men over women continuing education beyond a baccalaureate degree seems to be in line with other studies on the relative numbers of men and women in professional studies.

The results indicate that somewhat over a third of the respondents have already entered a career in psychology. As noted in Table 1, 36 per cent (44 per cent of the men, 24 per cent of the women) listed themselves as currently employed in jobs of a psychological nature, e.g., psychologist, school psychologist, psychometrist, etc. Some of the respondents are still of too recent vintage to be employed in any field. Of these, an additional 6 per cent (8 per cent of the men, 3 per cent of the women) are at present full-time graduate psychology students, while another 3 per cent are simultaneously working at full-time jobs in other fields and carrying on part-time graduate studies in psychology.

The fact that approximately two-thirds of the undergraduate psychology majors failed to enter the field professionally should not be a source of discouragement for psychology departments, nor be considered to indicate a waste of training. Rather, it can be viewed as affording an opportunity to present an accurate conception of psychology to the general public who may later have contact with psychologists, and providing a certain amount of psychological knowledge for persons who may wish to use it as a "service" subject, i.e., as a valuable

adjunct to their main work. The statements of respondents employed in other fields and of full-time housewives and mothers as to whether they considered psychology related to their work are pertinent in this respect. Of the 93 persons who stated they are currently employed in other fields and the 22 women who are full-time housewives and/or mothers, 71 felt psychology was either directly or indirectly related to their work; 34 saw no relationship between the two; and 10 (all housewives) omitted answering the question.

It is interesting to see in which types of work a knowledge of psychology was considered most useful. All respondents employed in the following occupations agreed they had found psychology to be either directly or indirectly related to their work: social workers, teachers, clergymen, physicians and nurses, employment and job placement workers. Those who made spontaneous comments cited the need for understanding and evaluating human motivation and behavior in connection with their work. A few persons commented on their utilization of special psychological techniques such as test in-

terpretation and job analyses. Among respondents employed in the following occupations, the majority found psychology directly or indirectly related to their work, but a few in each group reported no relationship at all: managers, salesmen, advertisers, housewives, and mothers. Of the respondents employed in the following occupations, only a few found psychology directly or indirectly related to their work, while the majority saw no relationship: accountants, lawyers, business executives. Respondents in clerical work unanimously reported psychology unrelated to their work.

Current salary was reported by 49 employed psychologists (36 men and 13 women) and by 83 persons otherwise employed (47 men and 36 women). The data in Table 1 show that the men as a group have done slightly better financially in nonpsychological jobs than in psychological work, whereas the women as a group are earning considerably more as psychologists than as nonpsychologists. The explanation seems to be that the nonpsychologist women are largely in clerical and secretarial work, very few being in professions or in upper-level busi-

TABLE 1

	Male		Female		Total	
	N	% of 139	N	% of 93	N	% of 232
Pursued graduate study	74	54	28	30	102	44
In psychology	38	27	17	18	55	24
In other fields	27	19	48	52	75	32
No graduate study						
Present occupation	61	44	22	24	83	36
Psychologist	12	8	3	3	15	6
Full-time graduate psychology student	51	37	42	45	93	40
Nonpsychologist	15	11	4	4	19	8
Full-time graduate student, non-psychology			22	24	22	10
Housewife/mother						
Usefulness of psychology in other work	15		13		28	
Yes	22		21		43	
Indirectly	14		20		34	
No			10		10	
No response						
Current salary						
Psychologists						
Range	\$1,785-\$12,000		\$2,250-\$5,000			
Median	\$3,950		\$3,750			
Nonpsychologists						
Range	\$2,000-\$15,000		\$2,100-\$10,000			
Median	\$3,986		\$2,860			

ness positions. Men, on the other hand, are in professions in larger numbers and, if in business, may have risen to executive positions. The usual male-female salary inequality is relatively small for the persons of this group employed in psychological positions.

The question concerning reasons for selection of an undergraduate major in psychology elicited the answer "interest" in subject matter from 127 of the 232 respondents. Some of these individuals explained how such interest had arisen, i.e., 7 had been engaged in some phase of psychological work during military service, 4 had had previous civilian psychological work experience, and 24 had found the introductory courses interesting.

Reasons other than "interest" are as follows. Since many respondents named several factors the total number of reasons exceeds the number of respondents. Seventy-three had decided to make a career in the field of psychology; 26 felt it would be useful as an adjunct to their main vocational goal, e.g., social work; 15 hoped it would help in the solution of personal problems; 11 stated they did not know why they had chosen it; 10 did not respond at all; 5 found the subject matter easy; 5 thought it would be good general background; 4 looked upon it as an alternative field of work if they did not gain admittance to medical school; 3 planned to use the knowledge in motherhood; and 1 wished to assist her husband who was already in the field.

The need for wider publicity concerning the professional standards required in psychology was brought to light by some of the spontaneous comments. Eighteen persons stated they were not able to continue study for advanced degrees and therefore could not obtain jobs in the field of psychology.

From their statements, the necessity of undertaking graduate work appeared to be something of which they were unaware during their undergraduate days and which first became apparent to them when they made an attempt to secure employment. One respondent still felt strongly about it and actually wrote the author a long letter which detailed her difficulties, i.e., lack of money for graduate training and rejection for jobs in personnel because of her youth. Undergraduate students of the decade 1939-1949 were fully aware of the need for graduate training in other professions, yet some respondents believed at that time that a baccalaureate degree would be sufficient in psychology. The author, in discussing vocational plans with undergraduates and their parents, finds that such an erroneous impression is still held by many. It is, therefore, a problem of deeper significance than disappointment of a few individuals in failing to secure a position immediately after graduation, important as that is. If persons who are undergraduate majors in psychology do not know the extent of training required to become a professional psychologist, how can the general public be expected to be able to evaluate the qualifications of psychologists from whom they may seek professional help? Statements during class lectures and in individual counseling seem to reach too few people. Perhaps the answer lies in the publicity attendant upon establishment of standards by means of legal certification or licensing.

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PROCEEDINGS OF THE FORTY-FOURTH ANNUAL MEETING OF THE SOUTHERN SOCIETY FOR PHILOSOPHY AND PSYCHOLOGY

D. MAURICE ALLAN, *Secretary*

Hampden-Sydney College

THE forty-fourth annual meeting of the Southern Society for Philosophy and Psychology was held at Knoxville, Tennessee, April 10-12, 1952. All section and business meetings were held in the Farragut Hotel. The host institution was the University of Tennessee. Local arrangements were under the efficient direction of Dr. Willis Moore, Dr. James M. Porter, Jr. and Mrs. Louise W. Cureton. The Program Committee consisted of Dr. Glenn Negley, Dr. Karl Zener, and the Secretary.

The Council of the Society met on the evening of April 10. Those present were President John B. Wolfe, D. Maurice Allan, Edward G. Ballard, Marion E. Bunch, Stanford C. Ericksen, Gerard Hinrichs, William M. Hinton, Willis Moore, and Herbert C. Sanborn.

The Program began with an Open House at the Psychological Service Center and a showing of psychological films in the Volunteer Room of the Hotel. Five sessions in philosophy and six sessions in psychology were held on Friday. On Saturday morning there was a symposium on the Measurement of Value with Willis Moore presiding. Chairmen of the philosophy sections were: George Abernethy, E. M. Adams, Harold N. Lee, Anna Forbes Liddell, and Howard L. Parsons. Chairmen of the psychology sections were: William Bevan, Jr., Elizabeth Duffy, Stanford C. Ericksen, Nicholas Hobbs, Sigmund Koch, Harold McCurdy, John P. Nafe, and Burke Smith.

At the Society's annual banquet on Friday night Dr. John B. Wolfe delivered the presidential address which was entitled "Psychology's Growth and the Southern Society."

MINUTES OF THE ANNUAL BUSINESS MEETING

President Wolfe called the meeting to order at 11 A.M. Saturday. The minutes of the forty-third annual business meeting were approved. The re-

ports of the Secretary and Treasurer were read and approved. The former reported that the circularizing of the membership for nominations for vacant offices, inaugurated this year, was responded to by only 10 per cent of the members. A balance of \$945.97 was reported in the treasury. Including new members, the membership totals 445.

Dr. A. G. A. Balz presented his report as delegate to the Southern Humanities Conference. Dr. Harold N. Lee, Chairman of the Advisory Standing Committee, reported that no complaints of violations of academic freedom had been received during the year. President Wolfe announced that Dr. Willis Moore had been appointed to succeed Dr. Lee whose term on the Advisory Standing Committee has expired.

On recommendation of the Council, eleven new associate members and thirty new members were elected to the Society. The associate members are: Louis Acuff, Zelmores Haber Brody, Robert L. Brown, Dorothy June Day, William Franklin Freeman, James Joseph Kirkpatrick, John Wilson Nichols, Finis Winston Poole, Robert Raymond Shrader, Pauline Wengate, and Gerald Henry Whitlock.

The full members are: George Lawrence Abernethy, Robert Lowell Arends, Malcolm Douglas Arnoult, Graham Barnat Bell, John Robert Bross, Grace Edith Cairns, Alonzo Joseph Davis, Herdis LeRoy Deabler, Robert Eugene Dewey, Frank Maurice du Mas, Charles Fowler Elton, Hiram Landor Gordon, Lewis Edwin Hahn, (Mrs.) Jane Ross Hammer, Arthur L. Irion, Hudson Jost, Marion Frances Jurko, Winthrop Niles Kellogg, Edward Joseph Keyes, Theodore Landsman, Clyde E. Noble, Slater Edmund Newman, Gerald Ross Pascal, W. Bernard Peach, Eliot H. Rodnick, Chandler G. Screven, Burke McGuire Smith, Louis Leon Thurstone, Thelma Gwinn (Mrs. Louis L.) Thurstone, Henry Nelson Wieman.

A motion by Dr. Joseph E. Moore that the newly

elected members should be allowed to vote from this point on was carried.

The following officers and Council members were elected by the Society: President, Willis Moore; Secretary, Oliver L. Lacey; Council members, Glenn Negley and Karl Zener. William M. Hinton continues as Treasurer.

It was moved and carried that the Society accept

the invitation of the University of Texas to hold the next annual meeting in Austin, Texas.

The Society unanimously recorded its gratitude to the University of Tennessee, the Committee on Arrangements, and the Farragut Hotel for their hospitality; also to Mrs. Edward E. Cureton and Dr. Lewis E. Hahn for their placement services. The meeting was then adjourned.

PROGRAM

Friday Morning

Philosophy Section 1: Aesthetics

HAROLD N. LEE, Chairman

The cosmology of Goethe's *Faust*. R. L. ARENDS, *Florida State University*.

Averages of aesthetic taste as evidence in aesthetics. LAURENCE J. LAFLEUR, *University of Akron*.

Art versus aesthetic in Aristotle. JOHN S. MARSHALL, *University of the South*.

The aesthetics of Byzantine art. CONSTANTINE CAVARNOS, *University of South Carolina*.

The semantic interpretation of a Platonic problem. CARL H. HAMBURG, *Tulane University*.

Philosophy Section 2: Epistemology

E. M. ADAMS, Chairman

Fact and proposition. G. E. HARMSE, *University of Virginia*.

A problem in dialectic. EDWARD G. BALLARD, *Tulane University*.

The motherological fallacy, or the limits of common sense. ROBERT E. DEWEY, *University of Maryland*.

The role of induction in metaphysics. RICHARD L. BARBER, *Tulane University*.

Aristotelian epistemology. S. R. KNIGHT, *University of Virginia*.

Philosophy Section 3: Symposium: Science and Methodology

GEORGE L. ABERNETHY, Chairman

Science and society. RUBIN GOTESKY, *University of Georgia*.

The problem of language. HERBERT C. SANBORN, *Vanderbilt University*.

Reporting operations research based on factor analysis. GERARD HINRICHS, *JHU Operations Research Office*.

Friday Afternoon

Philosophy Section 4: Ethics and Value Theory

HOWARD L. PARSONS, Chairman

A definition of social ethics. JOHN T. COCUTZ, *University of Georgia*.

The ethics of belief. JOHN KUIPER, *University of Kentucky*.

Shaftesbury, the mathematical analogy, and conduct. BERNARD PEACH, *Duke University*.

The nature and relations of fittingness as an ethical concept. D. MAURICE ALLAN, *Hampden-Sydney College*.

Purpose in history. QUINTER M. LYON, *University of Mississippi*.

Philosophy Section 5: Philosophy of Religion

ANNA FORBES LIDDELL, Chairman

Ontology the cure of secularism. FRITZ MARTI, *Marietta College*.

Ethics in a theological manner. SARAH WATSON EMERY, *Duke University*.

What commands ultimate commitment. H. N. WIEMAN, *University of Houston*.

The aesthetic component of religion. GRACE E. CAIRNS, *Florida State University*.

The concept of self of contemporary Protestant theology. PAUL E. PFUETZE, *University of Georgia*.

The metaphysical matrix of science. PETER A. CARMICHAEL, *Louisiana State University*.

Friday Morning

Psychology Section A: Perception and Sensation

JOHN P. NAFE, Chairman

The perceptual analysis of visual shapes and patterns. FRED ATTNEAVE, *Human Resources Research Center*.

The dependence of judged area upon color. WILLIAM BEVAN, JR. and WILLIAM F. DUKES, *Emory University*.

A correlational investigation of motivated perceiving. WILLIAM F. DUKES and WILLIAM BEVAN, JR., *Emory University*.

Further studies of visual symbols for purposes of communication. R. H. HENNEMAN, *University of Virginia*, and R. W. QUEAL, JR., *USAF Aero Medical Laboratory*.

The effect of training upon sensory organization. EDWARD J. KEYES, *Veterans Administration Hospital*.

Perceptual defense in normal and in schizophrenic observers. ELLIOTT MCGINNIES and JOSEPH ADORNETTO, *University of Alabama*.

Occupational and physiognomic stereotypes in the perception of photographs. PAUL F. SECORD, WILLIAM BEVAN, JR., and WILLIAM F. DUKES, *Emory University*.

Psychology Section B: Experimental Clinical

NICHOLAS HOBBS, Chairman

The effect of induced failure and success on the retentive processes of anxiety patients and normal subjects. ARNOLD KRUGMAN, *University of Kentucky and VA Hospital, Lexington, Ky.*

A study of level of aspiration variables in psychopathic, neurotic, and normal subjects. MURRAY J. LONSTEIN, *University of Kentucky and VA Hospital, Lexington, Ky.*

The registration by the Rorschach test of hypnotically induced hostility and depression. FRANK A. PATTIE, *University of Kentucky*.

The influence of vivid auditory hallucinations on psychological test performance—a case report. MORRIS ROSEMAN, *Roanoke VA Hospital*, and JOSEPH I. C. CLARKE, *Duke University*.

Comparison of manifest content of TAT stories and series of dreams of the same subjects. HIRAM L. GORDON, *Roanoke VA Hospital and Duke University*.

An equation for schizophrenia? FRANK M. DU MAS, *Louisiana State University*.

Cards, sequences of cards, and repetition as factors in Thematic Apperception Test behavior. B. B. MASON and C. H. AMMONS, *University of Louisville*.

A study of handwriting and perceptual errors among children. IRENE ANDERSON and MARILYN DORSEN, *Newcomb College, Tulane University*.

The treatment of delayed speech by child-centered therapy. HENRY J. DUPONT, THEODORE LANDSMAN, *Vanderbilt University*, and MILTON VALENTINE, *Stanford University*.

Psychology Section C: Applied

STANFORD C. ERICKSEN, Chairman

An investigation and application of techniques of estimating grade reliability. SCARVIA B. ANDERSON, *Tufts College*, and CLARENCE W. SPENCE, *George Peabody College for Teachers*.

Development of an objective proficiency check for private pilot certification. STANFORD C. ERICKSEN, *Vanderbilt University*.

A statistical evaluation of the accident-proneness concept. D. J. MOFFIE, *North Carolina State College*.

An experimental approach to the functional relationship between "display" and "control." WILLIAM D. GARVEY and WILLIAM B. KNOWLES, JR., *Naval Research Laboratory, Washington, D. C.*

The validity of a generalized scale for comparing interests in natural science subjects. S. C. WEBB, *Emory University*.

The relationship between primary personal values and specific interest patterns of college students. ROBERT S. WALDROP, *Vanderbilt University*, and JULIAN C. STANLEY, JR., *George Peabody College for Teachers*.

Frequency of student problems at each college year level. DOROTHY G. PARK, *North Carolina Board of Public Welfare*.

A trial test battery for predicting freshmen engineering course grades. WILLIAM COLEMAN, *University of Tennessee*.

A method of item analysis based on the theory of sampling from a finite population. EDWARD E. CURETON, *University of Tennessee*.

Psychology Section D: Physiological and Comparative

WILLIAM BEVAN, JR., Chairman

The influence of behavioral factors on the incidence of audiogenic seizures in rats. WILLIAM J. GRIFFITHS, JR., *University of Mississippi*.

The distribution of scotopic sensitivity in human vision. ARTHUR J. RIOPELLE and WILLIAM BEVAN, JR., *Emory University*.

Effects of frontal lobe injury upon learning, re-learning and reversal of an H-maze habit by white rats. LOH SENG TSAI, *Tulane University*.

The significance of tactual stimulation in the behavior of new born puppies. W. T. JAMES, *University of Georgia*.

The learning ability of prepubescent rats subjected to alterations in body metabolism. D. R. KENSHALO, *Florida State University*, and C. H. SCHEIDLER, *Washington University*.

Psychology Section E: General

ELIZABETH DUFFY, Chairman

Placing precision and angle of regard. THOMAS M. STRITCH and ARTHUR J. RIOPELLE, *Emory University*.

Assumed roles of motivation as affecting rotary pursuit performance. H. P. SEELY and C. H. AMMONS, *University of Louisville*.

The values of science to the scientist. KEY L. BARKLEY, *North Carolina State College*.

"Verifying" hypotheses by verifying their implicates. H. M. JOHNSON, *Tulane University*.

Friday Afternoon

Psychology Section F: Learning

SIGMUND KOCH, Chairman

An experimental investigation of cognitive factors as contrasted with non-cognitive factors in rote serial learning. W. G. WORKMAN, *Davidson College*.

The establishment of a secondary motive based upon the hunger drive. ELIZABETH ANN BICKNELL, DAVID S. SPERLING and JAMES S. CALVIN, *University of Kentucky*.

Learning the location of an irrelevant incentive when choices include relevant, irrelevant, and no apparent incentive. M. A. SCHMITZ, *University of Kentucky*.

Effect of backward conditioning on the properties of a stimulus associated with electric shock. JOHN A. BARLOW, *Duke University*.

Transfer of predifferentiation training in simple and multiple shape discrimination. MALCOLM D. ARNOULT, *Human Resources Research Center, Lackland Air Force Base, Texas*.

The effect of different types of warm-up activities on subsequent paired-associate learning as a function of level of practice. LELAND E. THUNE, *Vanderbilt University*.

An exploratory study of instrumental verbal conditioning. ERNEST MEYERS, *University of Kentucky*.

The relationship between meaning and familiarity. CLYDE E. NOBLE, *Human Resources Research Center, Lackland Air Force Base, Texas*.

Effects of practice conditions on aiming skill. E. HULLETT, A. J. ECKLES and R. B. AMMONS, *University of Louisville*.

Psychology Section G: Personality Measurement

BURKE MCG. SMITH, Chairman

"Comparable" paired-comparison items. JULIAN C. STANLEY, JR., *George Peabody College for Teachers*.

Curvilinearity in linearly restricted data. SUSAN W. GRAY, JULIAN C. STANLEY, *George Peabody College for Teachers*, and SCARVIA B. ANDERSON, *Naval Research Laboratory*.

Two contrasted measures of self-insight. WILLIAM D. SPEARS, JR. and JOSEPH P. ROBERTS, *George Peabody College for Teachers*.

An investigation on the use of the CVS abbreviated Wechsler-Bellevue Scale for Negro subjects. JAMES T. MORTON, JR., *Tuskegee VA Hospital*.

Age differences in children's reaction to toys. B. VON HALLER GILMER and KENNETH E. MOYER, *Carnegie Institute of Technology*.

An investigation into the diagnostic value of the Rosenzweig Picture-Frustration study. ROBERT L. BROWN and OLIVER L. LACEY, *University of Alabama*.

The reliability of a revision of Dymond's scales for the measurement of empathy. GRAHAM B. BELL, *Louisiana State University*.

Psychology Section H: Social

HAROLD G. MCCURDY, Chairman

Influences on the reliability and validity of LGD assessment. BERNARD M. BASS, STANLEY KLUBECK, and CECIL WURSTER, *Louisiana State University*.

A further exploratory analysis of factors associated with peer status among adolescent girls. JAMES E. GREENE, MARY E. WARDLOW, and R. TRAVIS OSBORNE, *University of Georgia*.

A study of some factors related to social acceptance among children at a summer camp. SIDNEY M. JOURARD, *Emory University*.

Attitudes toward the church among college and university students in 1936 compared with attitudes of the same persons fourteen years later. ERLAND NELSON, *University of South Carolina*.

Projective study of racial awareness and associated feeling in young children. C. SCHRAMM and R. B. AMMONS, *University of Louisville*.

Annual Banquet

Presidential Address: Psychology's Growth and the Southern Society. JOHN B. WOLFE, *University of Mississippi*.

Saturday Morning

Joint Session

Symposium: The Measurement of Values

WILLIS MOORE, Chairman

L. L. THURSTONE, *University of North Carolina* (representing psychology).

EDWARD E. CURETON, *University of Tennessee*. Discussion of Professor Thurstone's paper.

CHARLES A. BAYLIS, *University of Maryland* (representing philosophy).

IREDELL JENKINS, *University of Alabama*. Discussion of Professor Baylis' paper.

Council

EDWARD G. BALLARD, MARION E. BUNCH, KARL M. DALLENBACH, STANFORD C. ERICKSEN, LEWIS M. HAMMOND, GERARD HINRICHS, WILLIS MOORE, HERBERT C. SANBORN (Honorary Member for Life), and officers.

Manuscript received May 16, 1952

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL MEETING OF THE WESTERN PSYCHOLOGICAL ASSOCIATION

RICHARD KILBY, *Secretary*

San Jose State College

THE thirty-second annual meeting of the Western Psychological Association was held at the Hotel Californian in Fresno, California, April 25-26, 1952. The number of papers and symposia given was the largest in the association's history and reflects the rapid growth of the psychological population in the West. One hundred twenty-eight papers and six symposia were given in twenty sessions over the two-day period. A predominant number of the papers and symposia were in the clinical area, occupying eight sessions; approximately two sessions each were given to learning, experimental, personality, and statistics. Approximately 675 persons attended.

At the annual banquet on Friday evening, Robert Leeper gave the presidential address, "Rattie in a Crannied Box; or What?" He urged that, to discover fundamental factors even within small areas, we must use a vast range of situations rather than do "miniature-area research." Thus, to secure any precise understanding of learning, we must analyze learning situations in terms of the relatively specific problems involved, respectively, in the development of reward-expectation habits, punishment-expectation habits, sensory-organization habits, motor-discharge habits, etc. Organizational or cognitive theory emphasizes certain continuous functions, he said, as in Köhler's research on figural after-effects, but also stresses transformations and crystallizations which give marked discontinuities as well.

Special meetings and luncheons held in conjunction with the meeting were: the annual meeting of the California State Psychological Association; a luncheon for members of Psi Chi, sponsored by the chapters of Occidental College and Fresno State College; a luncheon for members of the Society for Projective Techniques; a luncheon for psychologists in private practice, sponsored by the Los An-

geles Society for Clinical Psychologists in Private Practice; and a regional luncheon and meeting of the Division of Clinical and Abnormal Psychology.

The Committee on Local Arrangements was composed of the following members of the Fresno State College staff: M. Bruce Fisher (chairman), Forrest D. Brown, John A. Buehler, Jr., Robert J. Howell, and Albert G. Wiederhold. The Program Committee members were Arthur Burton, Mason Haire, Joseph Luft, Bruce Fisher, C. W. Telford, and the secretary.

The following officers were elected for 1952-53: President, Ruth S. Tolman, VA Mental Hygiene Clinic, Los Angeles; Vice-President, Neil Warren, University of Southern California; Secretary, Richard Kilby, San Jose State College; Treasurer, Rheem Jarrett, University of California, Berkeley. The 1953 annual meeting will be held at Seattle, on the campus of the University of Washington, June 18, 19, 20.

In addition to selecting officers and place of next year's meeting, the following motions were passed at the annual business meeting. It was decided to continue publication, in the *American Psychologist*, of abstracts of papers given at the meeting. The Association accepted the invitation of AAAS to participate in its meeting to be held in San Francisco in December, 1954. In future elections a slate of at least three candidates for each office will be submitted. The following resolution regarding California's loyalty oath law (Levering Act) was adopted:

Believing that political tests and conformity oaths are an infringement on the traditional American rights of academic freedom; that by limiting and rigidly molding thought and inquiry such oaths hamper scientific progress, we, the members of Western Psychological Association in convention at Fresno, California, on April 25, 1952, declare ourselves in opposition to the enactment of Assembly Constitutional Amendments, Numbers 1 and 9, to the California State Constitution.

PROGRAM

Statistics I

ALLEN L. EDWARDS, Chairman

A factor analysis of the Thurstone Temperament Schedule. JAMES W. FRICK, *Santa Barbara College, University of California*. (Introduced by W. D. Altus)

Thurstone's *Temperament Schedule* was administered to 100 college women, aged 16 to 22. A centroid factor analysis yielded one group and three unique factors. This finding is not proof of fewer than seven factors since established measures of the presumed factors could not be included in the matrix. It is suggested, however, that the temperament schedules are still relatively impure.

A factor-analytic study of Navy reasoning tests with the Air Force Aircrew Classification Battery. PAUL R. CHRISTENSEN, J. P. GUILFORD, RUSSELL F. GREEN, and NORMAN W. KETTNER, *University of Southern California*.

As a means of identifying reasoning variance in the 22-test Aircrew Battery and of verifying results obtained in our first reasoning study, a factor analysis was made of the Air Force Aircrew Classification Battery and 32 reasoning and reference tests. Sixteen factors were extracted, rotated orthogonally, and identified.

A factor-analytic study of creative thinking abilities. J. P. GUILFORD, ROBERT C. WILSON, and PAUL R. CHRISTENSEN, *University of Southern California*.

Thirty-five experimental tests covering eight hypothesized abilities of creative thinking and 18 reference tests were factor analyzed. Sixteen factors were extracted and rotated. These were identified as verbal comprehension, numerical facility, perceptual speed, visualization, general reasoning, closure, word fluency, associational fluency, ideational fluency, originality, redefinition, adaptive flexibility, spontaneous flexibility, sensitivity to problems, a doublet, and a residual.

Some hypotheses and tests of evaluative abilities. ALFRED F. HERTZKA, RAYMOND M. BERGER, and J. P. GUILFORD, *University of Southern California*.

Evaluation is defined as an awareness of the agreement of an object, situation, conclusion, or creation with a standard or criterion of suitability

or goodness. The factors judgment and speed of judgment have been isolated previously in this domain. At least two additional evaluation factors are hypothesized. A battery of 33 evaluation and 11 reference tests has been assembled.

The purification of factor tests. HAROLD BORKO, *University of Southern California*.

The original form of the Guilford-Zimmerman Spatial-Visualization Test was "impure" in that it correlated highly with both the visualization and spatial factors. A revised form of this test was developed and analyzed to demonstrate that it had a higher visualization and lower space loading than the original. The methodology for the purification of this test is presented.

Factorial variances associated with university grade point average. EDMUND E. DUDEK, *University of Washington*.

A factor analysis of a matrix of 30 variables, including Freshman grade point average for three quarters, sex, age, and Entrance test scores for 1,883 Freshman students; resulted in identifying eleven factors. Both oblique and orthogonal rotations were used. The orthogonal rotations were more useful in identifying the factors associated with grade-point average than were oblique rotations.

A non-parametric test for the reliability of the difference between two proportions. J. A. GENERELLI and JOHN L. MICHAEL, *University of California, Los Angeles*.

The usual test of the null hypothesis applied in this situation requires an estimate of the proportion obtaining in the population from which the two samples are taken. The test described here is one which is independent of this estimate and contains only the difference between the two empirical values, the sizes of the two samples, the correlation (if any) existing between the proportions, and the desired confidence coefficient. The formula yields information as to whether, at the accepted confidence level, the two proportions are sample values from the same universe.

Statistics II

CLIFFORD T. MORGAN, Chairman

Avoiding spuriousness in biserial correlations used as coefficients of internal consistency. J. W.

HOLLEY and E. L. TAYLOR, *University of Southern California and Psychological Services, Inc.*

Mathematically exact formulas for computing item-test biserial and point-serial correlations corrected for spuriousness due to inclusion of the item in the total score are developed. These formulas require the same item values and total score statistics as those used in computing uncorrected coefficients, and little more computational work is required.

On the corrections of correlation coefficients for restriction of range. JOHN M. LEIMAN, *Human Resources Research Center, Lackland Air Force Base.*

An empirical check of the several equations for the Correction of Correlation Coefficients for Restriction of Range did not support the fundamental assumptions from which the equations were developed. The special cases when the corrections are appropriate are discussed.

A note concerning the reliability of point-biserial correlation. NORMAN C. PERRY, *San Jose State College.*

In this paper the origin and present usage of r_{pb1} are presented as an introduction. The need for some estimate of reliability is pointed out. Two solutions to this problem are presented: one exact but impractical, the other approximate but convenient.

The relationship of a point biserial coefficient of correlation to a phi coefficient calculated from use of extreme groups of various, but equal, proportions of a total criterion sample. WILLIAM B. MICHAEL, *The Rand Corporation*; NORMAN C. PERRY, *San Jose State College*, and J. P. GUILFORD, *University of Southern California.*

A formula is derived which relates a point-biserial coefficient to a phi coefficient calculated from use of contrasted groups of equal proportions. A technique is described by which the amount of systematic error in the formula may be ascertained. Tables are presented indicating percentages of error in formula estimates of point biserial coefficients for selected item-difficulty levels.

Increasing the purity of factor tests by item selection. J. W. HOLLEY, N. E. WILLMORTH, and E. L. TAYLOR, *University of Southern California and Psychological Services, Inc.*

The items of the Guilford-Zimmerman Temperament Survey were correlated with the ten factor tests. Items having high internal consistency and low correlations with the remaining tests were selected for the purified tests and scored on a new sample. Test intercorrelations were appreciably lower than for the original tests, while reliabilities were fairly comparable. The conclusion is that the method appears effective.

Industrial

DONALD A. RILEY, Chairman

Practitioner's plea to the professor or some needed research concerning supervisory development. PAUL C. BUCHANAN, *Naval Ordnance Test Station, Pasadena.*

Industrial personnel who organize supervisory training can obtain fairly complete information from the literature concerning traits desirable in supervisors and concerning factors in changing attitudes and developing skills. However, there are six areas in which research is conspicuously lacking. The specific problems in each of these areas are discussed with reference to practical training situations and to the literature.

A dual purpose attitude survey. BRYAN WILKINSON and JAMES H. MYERS, *Prudential Insurance Company, Los Angeles.*

The problem, devise an attitude survey to inform employees about company benefits while obtaining unbiased information on attitudes. Administration was on company time. Ninety-nine per cent of the employees returned usable questionnaires. When results were reported to everyone, information on benefits was given and company and community practices were compared. Much information, useful to management, was obtained.

Organizational effectiveness in two governmental agencies. ANDREW L. COMREY, *University of California, Los Angeles*, and JOHN M. PFIFFNER and HELEN P. BEEM, *University of Southern California.*

Under an ONR contract at the University of Southern California, studies were conducted separately in two governmental agencies. Criterion data were obtained for branch organizations in each agency. Questionnaires relating to supervisory practices, morale, and organizational procedures were administered within the branch or-

ganizations. These data were correlated with the criteria. Significant relationships with the criterion data were obtained.

Behavioral measure of criterion performance.

MAURICE CHORNESKY, *Human Resources Research Center, Lackland Air Force Base, San Antonio*. (Introduced by John M. Leiman)

Reliable measures in the behavioral domain are prerequisite to leadership study. An approach is presented wherein response modes of group members can be evaluated relative to a representative sample of life situations culled from a typically recurrent group. These evaluations can be regarded as *in situ* tendencies when behavior is defined as probability, as well as afford hypotheses for predictor development.

A comparison of the representativeness of check list rating and over-all ranking. JAY T. RUSMORE, *San Jose State College*.

Four groups, each consisting of 25 telephone operators, were rated with a check list and also ranked. Twelve additional cases were rated with the check list and with an over-all rating. Corrected for attenuation, the correlation between the results of the methods in both cases approached theoretical identity. This suggests that the methods were measuring the same variable and were equally adequate in terms of representativeness.

Introducing the Multi-Relational Sociometric Survey. MURRAY KAHANE and EUGENE TALBOT, *University of California, Los Angeles*.

The MSS (Multi-relational Sociometric Survey) is a new technique for studying interpersonal relationships within organizations by socio-matrix analysis. It permits measurement of the degree to which people understand, act in accordance with, and desire or reject relationships prescribed for them by the organization. Management's use of this technique facilitates the understanding of factors related to organizational effectiveness.

Learning I

C. W. TELFORD, Chairman

A test of Mowrer's two-factor theory using a response not evoked during the acquisition of anxiety. EUGENE EISMAN, *University of California, Los Angeles*.

The running response as the measure of anxiety usually used in testing the theory confounds the joint effects of reinforcement and anxiety. To avoid this the drinking response in the rat was used. Experimental results indicate that the two-factor theory is inadequate and that anxiety learning may be better accounted for on the basis of a monistic reinforcement theory.

A test of S-R vs. cognitive prediction of development of habits relative to stimulus components in discrimination learning. MORRIS ADERMAN, *University of Oregon*. (Introduced by Robert Leeper)

The hypothesis is, a response conditioned to a gestalt is also conditioned to the parts which make up the gestalt. The subjects were 60 control, 60 experimental Ss, 6-12 years old. The experimental group, after having been conditioned to cards containing an embedded K, responded to the K less than the control group, thereby supporting organizational theory.

An experimental study of the continuity-noncontinuity issue. KAREL J. LAMBERT, *University of Oregon*. (Introduced by Robert Leeper)

Sixty-one human Ss had to find the correct area pattern on the covers of children's books that contained various pictured objects and colors. Half the Ss had a two-book problem and half had a four-book problem. The experimental groups had the patterns reversed. Discriminably different stimulation was guaranteed. The results favor a noncontinuity theory of discrimination learning.

Implications of trial-and-error learning theory for combinations of mental sets in the solution of anagrams. IRVING MALTZMAN and LLOYD MORRISSETT, JR., *University of California, Los Angeles*.

It was assumed that the term *mental set* refers to behavior which can be accounted for in terms of the acquisition of habit strength by a class of stimuli for the elicitation of a particular class of responses. An implication concerning the combination of separate and compound habit strengths was tested with anagram sets. The results supported the basic assumption.

Response repetition as a function of interrupting a verbally rewarded series. G. RAYMOND STONE,

Human Resources Research Center, Hamilton Air Force Base.

Four groups of Ss (total $N = 400$) contributed data to four experimental conditions in which a modified Thorndikian serial verbal multiple-choice design with fixed incentives was employed. The results indicate that interrupting a rewarded series by an S-R item having no incentive response significantly reduces the amount of repetition not only to the specific item, but to the entire series.

The function of landmarks in human maze-learning.

DAVID E. MEISTER, *U. S. Navy Electronics Laboratory, San Diego.*

Thirty-six subjects learned visual mazes containing no landmarks and landmarks in choice points, correct alleys, and incorrect alleys. Choice-point and correct-alley landmarks proved more effective for learning the *entire* maze than incorrect-alley landmarks and the control maze. It is suggested that landmarks assume from the choice point the role of eliciting the correct response.

Influence of similarity of choice point and goal cues on discrimination learning. FRANK J. BAUER and DOUGLAS H. LAWRENCE, *Stanford University.*

Five groups of animals were trained and reversed on a simultaneous brightness discrimination with the following relationships between the brightness of choice point and corresponding goal box: (a) identical, (b) reversed, (c) randomly paired, (d) both goal boxes same as positive cue, and (e) both same as negative. Predictions in terms of stimulus generalization and secondary reinforcement failed to hold.

Learning II

G. RAYMOND STONE, Chairman

A search for subthreshold conditioning to four different auditory frequency values. R. C. WILCOTT, *University of California, Los Angeles.*

Numerous previous investigators have reported that an energy value that is below the absolute threshold as determined by a psychophysical procedure can be a stimulus. A search for subthreshold conditioning to four different auditory frequency values was made, and the results demonstrated no conditioning. Further experimentation is necessary before the validity of sub-threshold stimulation can be accepted.

The effect of the addition of a visual stimulus during the extinction of a conditioned bar-pressing response. JOHN V. HARALSON, *Los Angeles State College.*

After training rats to make a bar-pressing response, the response was extinguished: (a) In the presence of a dim light which the rat turned on each time a response was made. (b) In the presence of a dim light which remained lighted throughout extinction. (c) In the absence of the light stimulus. No significant differences were found between groups.

The acquisition of an instrumental response with whole and fractionated incentive. EDWARD L. WIKE and ROBERT L. BATTERTON, *University of California, Los Angeles.* (Introduced by Irving Maltzman)

The 1941 Wolfe-Kaplon runway study was repeated with rats. Rats receiving four peanut sections (F) were significantly faster than a group (W) rewarded with a whole peanut section of equal weight. Reward reversal led to a rapid, significant decrease in running time for the W-F group. The Wolfe-Kaplon findings were generally confirmed. The results were discussed in terms of Hull's system.

Transfer of training from discrimination learning to concept-formation. FRANK RESTLE, *Stanford University.* (Introduced by D. H. Lawrence)

Learning to discriminate drawings of faces on the basis of elements led to positive transfer on a concept-formation test based on the same elements. An equal amount of pretraining in which subjects reacted to faces as wholes had a slight negative effect in transfer to concept-formation. Transfer of "discriminated identifications" was suggested as an explanation.

Stimulus-response relationship as a dimension of task similarity-dissimilarity in transfer of training. FRANCIS E. JONES, *Human Resources Research Center, Hamilton Air Force Base.*

Transfer effect in a two-hand coordination task was investigated as a function of degree of reversal of within-task S-R relationships. Utilizing equated groups, five degrees of reversal were sampled: no-reversal, $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ -, and full-reversal. When effect was plotted against reversal, the function obtained approximated a negative growth function,

but with all values positive. The highest value was at no-reversal.

The individual differences factor in proactive and retroactive transfer. PAUL J. HOFFMAN, WILLIAM R. GOODWIN, and DOUGLAS H. LAWRENCE, *Stanford University*.

An attempt was made to determine the relationship between individual differences in initial performance and degree of original and interpolated learning, as related to proactive and retroactive transfer. Results indicated that a large portion of the predictable proactive and retroactive transfer effects can be attributed to initial status and to interactions involving initial status and degree of learning.

The effect of homogeneity of items on immediate recall. MONCRIEFF SMITH, *University of Washington*.

A comparison was made of the free recall of a 15-unit list of adjectives when the words were presented alone and when they were illustrated by a stick-drawing. On the first list presented, the comparison favored the illustrated words, but this advantage disappeared in subsequent lists. The results were interpreted in terms of intralist similarity.

Experimental I

DONALD W. TAYLOR, Chairman

The relation of convergence and elevation changes to judgments of size. THOMAS G. HERMANS, *University of Washington*.

Observers ($N = 49$) indicated with an adjustable aperture judgments of size of a standard aperture while variations in convergence and elevation were effected. Judged size decreased with increase in both variables, and an analysis of variance showed both to be significant. The author relates these data to the problems of size constancy and the moon illusion.

The effect of optical eccentric chromatic distortion on the perception of depth. GEORGE E. MOUNT, *University of California, Los Angeles*.

Differences in the magnitude of a type of chromatic distortion for the two eyes will result in the production of disparate images for adjacent forms having different spectral distributions. Differences are found in the magnitude and direction of distortion between individuals and for different illumination

levels. The effect may account for the perception of hues in depth under certain conditions.

The effect of reward on objectivity of perception. IRA ISCOE, *University of Texas*.

Two groups of boys and girls (preadolescent) saw silhouette slides (exposed for .02 sec.) of a competing boy and girl making equal numbers of errors. Subjects recorded their choices after each scene. Estimation of errors was made at conclusion of showing. Reward did not influence accuracy of immediate estimate. Own sex bias was significant in final estimate.

The influence of identifying words on the recognition of ambiguous forms. EDWARD W. GELBREICH, *San Diego State College*.

The Carmichael, Hogan, and Walter study was repeated using new forms and a recognition test to discern the influence of words. Tests of significance between control and experimental conditions do not permit agreement with expected previous results. Matched groups were used. Over 80% of the perceived forms were correctly recognized in all conditions. The results indicate no decided influence of words upon recognition of perceived forms.

Perceived motion. D. H. LAWRENCE and R. D. EDGREN, *Stanford University*. (film)

This film is intended to present some of the experimental conditions described by J. F. Brown in "The Visual Perception of Velocity" (1931). Objects moving at a standard speed are paired with objects moving at five successive variable speeds. In various scenes, the effects of distance and change of size of objects and rectangular backgrounds are shown. The purpose of showing this film would be to get comments and criticisms. It has not been available long enough for the compilation of extensive data. If it succeeds in measuring the factors which Brown measured, it may be used as (a) a demonstration film for perception classes and (b) a means of studying the visual perception of motion in large groups.

A possible statistical basis for a detection decision by a human operator. C. A. SHEWMAKER, *Human Factors Division, U. S. Navy Electronics Laboratory, San Diego*. (Introduced by Arnold M. Small)

This paper is a report of attempts to correlate physical and statistical characteristics of a par-

ticular type of visual stimulus with the empirical probability of detection of a specific event occurring in the stimulus.

The psycho-acoustic research facility at the U. S. Navy Electronics Laboratory. C. E. CUNNINGHAM, *U. S. Navy Electronics Laboratory, San Diego*. (Introduced by Arnold M. Small)

A Psycho-acoustic Research Facility has been developed at the U. S. Navy Electronics Laboratory which features fully automatic programming, timing, and test control. Five large relay-type racks house many types of audio equipment which may be interconnected as desired and programmed into a listening test. Versatility and automaticity make this a nearly universal psycho-acoustic research facility.

Masked auditory threshold for a pure tone presented randomly at four frequencies. PAUL I. ATKINSON, *U. S. Navy Electronics Laboratory, San Diego*. (Introduced by Arnold M. Small)

The aural threshold for a pure tone masked by thermal noise was compared for two conditions: (a) test tone presented at fixed frequency, (b) test tone randomly presented at each one of four predetermined frequencies. No evidence was found to indicate any significant difference between the thresholds for the two conditions.

The measurement of visual perceptual latency as an index of retinal interaction effects in the human fovea. PAUL G. CHEATHAM, *U. S. Navy Electronics Laboratory, San Diego*.

Perceptual latency was measured for three trained Os by the masking method, under five conditions designed to produce foveal summation or inhibition. Only summation occurred as indicated by a significant shortening of perceptual latency. Significant inhibition was not produced. Perceptual latency measurements provide a sensitive index of the temporal characteristics of retinal activity.

A test of the validity of the Elsberg method of olfactometry. F. NOWELL JONES, *University of California, Los Angeles*.

Blast-injection thresholds were obtained for three levels of odor concentration for each of two substances. Since concentration made no significant difference in measured threshold, it is concluded that Elsberg thresholds are aerodynamic rather than odorous.

Experimental II

M. BRUCE FISHER, Chairman

Methodological considerations in the use of electrodermal data. WILLIAM W. GRINGS, *University of Southern California*.

Three different manifestations of electrical skin activity (DC resistance, AC impedance, and potential) were compared with reference to electrical properties, interrelations, and distribution characteristics. Data were presented showing skin impedance as a function of frequency, resistance versus reactance components, conductance as a function of current; as well as interrelations of basic measures, frequency distributions, and differences among electrode locations.

Muscular activity during relaxation. ROBERT B. VOAS, *University of California, Los Angeles*.

The level of muscular activity as reflected in the electromyogram was measured in 37 individuals under instruction to relax completely. Seven muscle groups from the face, arm, and leg were measured twice, at least a week apart. Patterns characteristic of given individuals were found. The frontalis muscle gave a high level of activity in all subjects.

A hypnoidal degree of relaxation and the recall of completed and interrupted tasks. J. WESLEY SANDERSON, *University of California, Los Angeles*.

Twenty subjects were interrupted half of the time while writing captions for cartoons. Ten subjects underwent progressive relaxation procedures between two recall efforts. A reminiscence effect occurred for group E, at the .02 level, largely contributed by completed items. If completed items are considered more meaningful, results support the hypothesis that relaxation enhances the recall of meaningful material.

Effects of cortical lesions upon the onset of hoarding activity in rats. JOHN S. STAMM, *California Institute of Technology*.

Fifteen adult male rats were used; 6 as controls, 5 with large lesions in the frontal, and 4 in the caudal cortical regions. Half-hour daily hoarding trials were given for 41 days. Histological examinations showed lesions from 25 to 60%. Hoarding was shown by all controls, 4 of the frontal, and only 1 of the caudal rats. The con-

trol rats consistently hoarded more pellets than did the experimental ones; although the differences were not very large.

Infantile deprivation and adult social behavior in the white rat. RICHARD A. LITTMAN, *University of Oregon*.

Albino rats weaned, divided into two groups; E's immediately given fifteen day irregular feeding schedule; C's on ad libitum schedule. One hundred and forty days later individually trained in Skinner box. Then pairs run, one E and C to a pair. Analyzed for relation of infantile deprivation to paired response frequencies. No simple relation; E's showed anxiety-like behavior.

Primary reinforcement as need reduction. CALVIN W. THOMSON, *New Mexico College of A. and M. A.*

The adequacy of the hypothesis that primary reinforcement is biological need reduction was tested in the following manner: Surgically rendered ageusic and anosmic rats were made sodium deficient and trained on a single-unit T maze which contained saline as an incentive. Normal animals were similarly trained as a control. The results supported the hypothesis that need reduction can support learning.

Köhler's satiation theory and individual differences in problem solving. JACK FOX, *University of California, Los Angeles*. (Introduced by Irving Maltzman)

The hypothesis was tested that the satiation theory—derived from perception—is applicable to problem solving and that individual differences in satiation will express themselves in curvilinear correlation of individual differences in rates of figure-ground reversals (vase-faces figure) and rates of problem solving with anagrams. Eta (.66) and curvilinearity were significant beyond .001 level. There were 224 subjects.

A preliminary investigation of rhythm and tracking. ROBERT M. GOTTSANKER, *Santa Barbara College, University of California*.

Study was made of three aspects of rhythmic performance to determine which, if any, account for the superiority of rapid over slow handwheel rotation in tracking. Rapid, discrete stimuli and effort patterns did not improve performance when slow rotation was retained. However, repetitive

key tapping gave the same kind of results previously found for rapid rotation.

Social

DAVID KRECH, Chairman

Class consciousness in a small western city. S. STANSFELD SARGENT, *Barnard College, Columbia University*.

New interview techniques, direct and indirect, were used to disclose awareness of class differences and class membership, in a Pacific Coast city of nearly 20,000. The findings were supplemented by data on residence and club membership in relation to occupation. Results show less class consciousness and class distinction than in Eastern and Mid-western communities of comparable size.

A study of cheating on a university campus. BERNICE R. EISMAN, OKELLAN N. GRANT, CAROLE C. HORN, VERNE J. KALLEJIAN, JAMES Q. KNOWLTON, and JACK K. WEINSTOCK, *University of California, Los Angeles*.

Data, in the form of responses to a questionnaire regarding cheating at the University of California, Los Angeles, were subjected to analysis. Five major variables were isolated and specific relationships among them were hypothesized and tested. Significant relationships, and their directions, were determined between cheating behavior, attitude toward cheating, estimation of the amount of cheating done by others, suggested punishments for cheating, and maturity indices such as age, self-support, etc.

A study of age relationships by hypothetical situations. ARNOLD S. GEBEL and GEORGE F. J. LEHNER, *University of California, Los Angeles*.

A questionnaire study using hypothetical situations was administered to a group of college students for determining the relationships between own age and such factors as estimated ideal age of self, parents, siblings, spouse, friends, etc. Summary of findings will include discussion of possible dynamics of age relationships, their implications for relations of self to past, present and future, and their possible clinical use.

Attitudes of signers and non-signers of the University of California's loyalty oaths. BRITOMAR J. HANDLON and LESLIE H. SQUIER, *University of California, Berkeley*. (Introduced by David Krech)

Fifty University of California students (Lecturers, Research and Teaching Assistants) were interviewed and given the CPOS Authoritarianism scale. Among other results, non-signers had a broader interpretation of the function of a university, gave a more rigorous interpretation of academic freedom, and scored significantly lower on authoritarian attitudes.

Frames of reference and pluralistic ignorance.

WALTER KAPLAN and RICHARD A. LITTMAN, *University of Oregon*.

Jewish and gentile fraternity students were given two forms of a "projective" questionnaire. Questionnaire dealt with problem situations involving Jews; subjects were to impute thought to either a Jewish or gentile character. Similarities and differences in responses of Jews and gentiles were a function of both the situations described and the character to whom statements were imputed.

Measuring non-conforming behavior by the direction of perception technique of attitude measurement. RAYMOND E. BERNBERG, *Los Angeles State College*.

The direction of perception technique was used to measure non-conforming behavior. Groups of boys, median and modal age, 18 years, differing in intelligence, socioeconomic, and cultural background took two forms of the test. An analysis of item distribution disclosed evidence for the basic assumption of direction of perception. This and other evidence provides normative data for further research.

The discrimination of sex differences by young children. ALLAN KATCHER, *University of Washington*.

Two hundred sixty-six children, ages 3-9, were presented with segments of drawings, illustrating clothed and nude adults and children. Subjects were required to identify sex appropriate cues when presented with a pair of segments, one of each sex. Sex-differentiating characteristics of clothing were most easily identified, followed in order by hair, genitals, and breasts.

Personality I

WILLIAM D. ALTUS, Chairman

Self-organization as a factor in the performance of selected cognitive tasks. RAVENNA MATHEWS,

CURTIS HARDYCK, and THEODORE R. SARBIN, *University of California, Berkeley*.

A study was done on the relation of certain personality organizations to (a) characteristic ways of judging and (b) types of response to motor conflict. Prior to the experimental procedures, the subjects were classified into 3 groups on the basis of MMPI profiles and predictions made for each group. The predicted responses were observed at .05 confidence levels.

Compulsivity as a determinant in selected cognitive-perceptual performances. B. G. ROSENBERG, *University of California, Berkeley*.

The investigation concerned itself with the cognitive-perceptual characteristics of compulsive neurotics. It was concluded that compulsives err more systematically in the direction of symmetry than normals. No significant differences in persistence toward closure between normals and compulsives occurred. Compulsives possess a higher relatedness to the two perceptual variables, symmetry and closure, than do normals.

Global aspects of personality and perception.

MARVIN SPIEGELMAN, *University of California, Los Angeles*.

Hypothesis: Individual differences in perception of a motion picture are a function of global aspects of personality. Rorschachs were administered to 35 subjects who had seen a film and had answered open-ended questions about their perception of it. Four clinical experts were able to match the Rorschachs and perceptual protocols at the .056 and .001 levels of confidence.

The measurement of levels of aspiration. JOHN R. HILLS, *University of Southern California*. (Introduced by J. P. Guilford)

A normative measuring instrument which will evaluate the levels of aspiration in specific areas of striving has been administered along with a typical goal-discrepancy measure to a group of male, lower-division students. Results indicate that an individual's aspiration level in various areas is not necessarily the same but that the goal-discrepancy score may be a fairly good over-all measure.

Some personality correlates of independence of judgment. FRANK BARRON, *University of California, Berkeley*.

Persons who showed independence of judgment in an experimental social situation (devised by

Solomon Asch) in which there was strong pressure from their peers to conform to a false group opinion were studied through the use of objective personality tests. As compared to those who yielded to group opinion, they proved to be more complex and intelligent individuals, and they cathected such values as inventiveness, logical thinking, open-mindedness, and idealism. Yielders were more traditionalist, ingroup-oriented, practical-minded, and extraceptive.

Level of aspiration as a measure of delinquency proneness. RUSSELL N. CASSEL, *Parks Air Force Base*, and ROBERT VAN VORST, *Nelles School for Boys, Whittier*.

The Cassel Group Level of Aspiration Test (CGAT) was administered to 815 individuals from "in-prison" and "out-of-prison" groups. Comparisons on test indices were made between members of the two groups. The mean D-Score discerned reliably at the 1% level of confidence between members from the two groups.

Peer status as related to measures of personality in the fifth grade. ANN NOWELL, *San Diego County Probation Department*.

The present investigation was primarily a methodological one of utilizing sociometric, psychometric, and projective measures of personality on thirty elementary school subjects to ascertain which measures held most promise for research into the interwoven pattern of "attributes of personality" and "status."

Empathic understanding operationally defined in terms of the screening-diagnostic interview. THOMAS G. MACFARLANE, *University of California, Los Angeles*.

An integrated conceptual definition of empathic understanding is organized in terms of Self, Other, and Relationship. Further differentiation into twelve categories is made, each category being defined by statements referring to the patient's experiences during the screening-diagnostic interview. Immediately after the interview, the interviewer attempts to sort the statements as the patient sorts them, providing a measure of empathy.

Personality II

S. STANSFELD SARGENT, *Chairman*

Preliminary research on the specialization level scale of the Strong Vocational Interest Blank for

men. MILTON G. HOLMEN, *Stanford University*.

The specialization level scale was developed to differentiate between medical specialists and physicians in general. Preliminary research indicates that it will also differentiate between occupational groups within the areas of physical science, social science, and accountancy. It also appears to differentiate between chemists with PhD's and those without this degree, but not between successful and unsuccessful candidates for the MBA degree.

A method of introducing psychology and psychiatry to first-year medical students. WILLIAM H. BROWN and IJA N. KORNER, *College of Medicine, University of Utah*.

The paper describes the techniques used to introduce first-year medical students to their own dynamics and, in turn, to provide them with a better basis for observing and understanding the behavior of others.

Certain personality characteristics of potential hypertensives. L. G. CARPENTER, JR., R. E. HARRIS, M. B. FREEDMAN, M. SOKOLOW, and S. P. HUNT, *University of California School of Medicine, San Francisco*.

It was demonstrated that young women having blood pressure patterns associated with the development of hypertension in later life are characterized by a personality constellation different from normals. This was done by inducing psychological stress in meaningful social situations and making blind analyses of pre- and poststress test patterns, evaluation of behavior during stress, and a psychiatric interview.

The self-concept and feelings toward others as expressed by hospitalized psychotic patients. STEPHEN S. RAUCH, *San Francisco State College and Permanente Psychiatric Clinic*, and MARY DARBY RAUCH, *Permanente Psychiatric Clinic*.

Attitudes toward Self, attitudes toward others and toward authority figures were indirectly expressed by 58 hospitalized male schizophrenics, and rated on eleven dimensions by trained independent judges. The average reliability of .71 indicates that psychotics do communicate their basic feelings with consistency. A higher relationship was found between Self and Authority attitudes than Self and Others attitudes for this group.

Developmental study of the relation of family variables to children's intelligence. MARJORIE P. HONZIK, *University of California, Berkeley*.

In a representative sample of 250 children, socioeconomic status, parents' education, and ratings of mothers' intelligence showed an increasing relation to the children's mental test scores between 21 months and 18 years. No significant age trends were noted when ratings of marital adjustment or parental attitudes were related to the children's intelligence. The implication of these findings is discussed.

Subjective size in personality and in perception.

BETTY L. KALIS and ROBERT E. HARRIS, *University of California, Berkeley and San Francisco.*

A perceptual experiment maximizing autistic factors and minimizing ordinary environmental or constancy cues was analyzed to determine the extent of covariation with personality factors. The tendency to perceive objects as small or large appeared significantly related to congruity vs. non-congruity of self-other perception. The task seems to tap enduring subjective organizational modes, revealed in the absence of familiar cues.

Personality factors in choice of nursing. ALMA P.

BEAVER, *Santa Barbara College, University of California.*

Eighty-six student nurses and a controlled group of liberal arts education majors were given the MMPI. An item analysis identified 66 items which differentiated the groups, the critical ratio of the difference being greater than 2.00 for all items. Four factors tend to characterize the nurses: conventionality, absence of hypochondriasis, freedom from neurosis, and a social-sexual factor.

The relationship between the judged desirability of a trait and the probability that the trait will be endorsed. ALLEN L. EDWARDS, *University of Washington.*

A group of subjects judged the desirability of 140 personality trait items. Scale values of the items were found by the method of successive intervals. Another group of subjects responded to the items as in an ordinary personality inventory. The frequency with which an item was endorsed was found to be a function of the judged desirability of the item.

Personality correlates of Q-L differentials for college males. WILLIAM D. ALTUS, *Santa Barbara College, University of California.*

Q-L discrepancy scores on the ACE for 200 college males were used for analyzing personality differences as revealed by the group MMPI. The

high Q men were significantly more masculine, told significantly more "lies." Much less interested in reading, the high Q men also evinced less poise and pleasure in interpersonal relations. No significant differences in personal adjustment were noted.

Personality III

WILLIAM B. MICHAEL, Chairman

Self-percepts of stutterers measured by the W-A-Y technique. SEYMOUR L. ZELEN, JOSEPH G. SHEEHAN, and JAMES F. T. BUGENTAL, *University of California, Los Angeles.*

Using the W-A-Y technique, an analysis was attempted of the effect of stuttering upon self-perceptions. Thirty stutterers were compared with one hundred and sixty non-stutterers along frequency of use of such content categories as group identification, positive-negative affect, and recognition of themselves as stutterers. The stutterers were divided by sex and their responses compared along four indices.

An interpretation of a general factor on the MMPI.

GEORGE S. WELSH, *Veterans Administration Hospital, Oakland.*

Factor studies have identified a first MMPI factor: "general maladjustment." Four estimates of this factor are highly intercorrelated: (a) highest scales Pt, Sc ; (b) $(Pt + Sc - 2K)$; (c) number of scales ≥ 70 ; (d) items scored on three or more scales. From these, a scale has been developed. The factor seems less one of maladjustment than of "introversion"; it is common to various populations.

The therapeutic value of recognition. W. E.

PAYNE, *Coeur d'Alene, Idaho.*

This is an attempt to isolate the significant common factors in group behavior control and individual emotional adjustment. The procedure consisted of discussion of representative experiments in group behavior control and individual emotional adjustment by means of adapted subject recognition. It is concluded that a large part of child delinquency, children's emotional difficulties, and adult pathological behavior appears symptomatic only of a deficiency of recognition.

Analysis of dream images by means of a questionnaire. ERNEST BELDEN, *U. S. Army Hospital, Fort Ord.*

Fragmentary dream images of a normal male group were tabulated and compared with another normal group. Results suggest reliable consistencies between the two samples. A comparison of dream images of a normal and a psychiatric group by means of item analysis suggests that such things as frequency, recurrence and experienced fright, and unpleasantness differentiate between the two groups.

A "Moral Maturity Scale" applied to the statements of forty-two members in group psychotherapy projects at the California Institution for Men, Chino. DAVID D. EITZEN, *University of Southern California*.

Assuming that "crime" is a form of overcompensation for feeling handicapped to deal with life in terms of personal standards of self-worth, the tape recorded expressions of attitudes and behavior as expressed in group psychotherapy sessions (8 men per group) were plotted on a scale ranging from courageous and creative adjustment to that which is defensive, evasive, and withdrawing.

Relationships of parental domination to the personality of college students. WILLIAM M. MCPHEE and FLOYD W. STETTLER, *University of Utah*.

The California Tests of Personality, completed by 147 unmarried college students, were dichotomized according to whether or not the students had been dominated by their parents. Those individuals who had been dominated tended to be more poorly adjusted to life's situations than their associates who were less dominated.

The conditioned response and nocturnal enuresis.

JOSEPH D. WEENER, *The Enurstone Company*.
(Introduced by J. F. T. BUGENTAL)

A questionnaire was sent out to 475 families whose children had used a modification of the Mowrer conditioning apparatus in the treatment of enuresis. Since replies were still being received at this writing, only a preliminary survey of the results could be made. It appears that in a great majority of the cases the problem was successfully alleviated, thus supporting Mowrer's contentions.

A study of the anxiety level of volunteers and non-volunteers. B. LEBOVITS and JACK FOX, *University of California, Los Angeles*. (Introduced by IRVING MALTZMAN)

Data of a previous experiment were evaluated to see if the anxiety level of subjects violates the as-

sumption of random representative sampling. Specifically, volunteers vs. non-volunteers, and abnormal psychology classes vs. general psychology classes were compared on an anxiety scale. The results show that the former approach significance with a two-tailed test, and are significant with a one-tailed test.

A factor-analytic study of traits of military leadership. JASPER W. HOLLEY, *University of Southern California*.

A battery of 38 personality tests covering thirteen hypothesized traits of military leadership were administered to a military population. A factor analysis of these data yielded eleven identifiable factors. Three previously isolated factors were verified on a military population, two others were redefined, while six new factors of kindness, selectiveness, competitiveness, religion, conventionalism, and discipline were added to the list of known traits.

Psychotherapy

CLARE W. THOMPSON, Chairman

Roles patients take in group therapy; a factor-analytic approach. F. HAROLD GIEDT, *Veterans Administration Mental Hygiene Clinic, San Francisco*.

This is an attempt to identify clusters of persons similar in their group behavior by correlation technique. Pairs of therapists check as true or false 100 statements of group behavior for 50 patients. From their pooled descriptions of each patient tetrachoric correlations between all patients are analyzed for clusters. The unique characteristics of persons in each cluster define their role.

The use of group-therapy for cases of traumatic war neurosis. HENDRIK LINDT and MIRIAM MILLS, *Veterans Administration Mental Hygiene Clinic, Los Angeles*. (Introduced by JOSEPH SHEEHAN)

After first having been separated from their family group by entering military service, many combat veterans experienced again either separation from or disintegration of their wartime group. The resultant loss of group morale was often a factor in precipitating a traumatic neurosis for which at least in part a therapy-group provided an appropriate corrective emotional experience.

Changes in personality test measures resulting from participation of college students in group-centered psychotherapy. LAWRENCE BARR, *El Camino College*.

The study was designed to determine the effects of group-centered psychotherapy on the social adjustment of college students. Tests included in the pretherapeutic and posttherapeutic batteries were the Minnesota Multiphasic Personality Inventory, Minnesota Personality Scale, and Thematic Apperception Test. Significant reductions in defensiveness and increased social adjustment scores were observed among experimental subjects. Controls showed no significant changes in retesting.

Experiment in teaching and testing psychodramatic techniques. ANNA B. BRIND, ROBERT B. HAAS, and NAH BRIND, *California Institute of Psychodrama, Los Angeles*.

During winter semester 1951-52 The California Institute of Psychodrama conducted a class in role playing and related techniques. The students were social workers and youth leaders. Each technique learned and discussed in class setting was then applied by a volunteer group in actual agency work, and then reported on and fed back at one of the following sessions. Group summarized methods and achievements as very satisfactory.

Explicit analysis of topical concurrence in diagnostic interviewing. J. F. T. BUGENTAL, *University of California, Los Angeles*.

Two experienced clinicians each briefly interviewed four patients of varied nosology. Type-scripts of these eight interviews yielded 954 thought units. Each unit was studied for its agreement with or divergence from the topical content (subject matter) of the preceding speaker's statement. The findings are studied for interviewer differences and consistencies and for patterns of response to different concurrence levels.

Mutual (group) therapy for exhibitionists on probation. JOHN W. HOWE, *Meyers Clinic, Los Angeles*.

Seventeen men, some of their wives, man therapist, woman therapist, and a few friends meet one night a week. How were we brought up to believe and feel about life, sex, success, ourselves? How did this lead to our personalities, symptoms—especially exposure? Our similarities, differences? How can we help ourselves; our children; other exhibitionists? Two years' results: one known relapse.

Fear-reduction during stuttering in relation to conflict, "anxiety-binding" and reinforcement.

JOSEPH SHEEHAN, *University of California, Los Angeles*.

The occurrence of stuttering reduces the fear which elicited it. Successful avoidance builds up anxiety which the stuttering dissipates. Like tics and compulsions, stuttering "binds" anxiety and reduces it. During the block there is sufficient reduction in fear, avoidance, and outward tension to resolve the conflict, permitting release of the blocked word. This reinforces and maintains the symptom.

Non-formal training of counselors; a professional question. J. GUSTAV WHITE, *Chapman College*.

Some observations and convictions regarding the obligation of professional psychologists to initiate and constantly guide non-professionals; based on two decades of college teaching and private practice of psychological counseling. Also an outline of the minimum information and training requisite for amateur counseling of puzzled persons.

Psychodiagnostics I

JOSEPH LUFT, Chairman

Projective measurement of hostility. SOLOMON DIAMOND, *Los Angeles State College*.

Multiple-choice judgments of what "most people" think characteristic of various occupational groups yield an hostility score. Fantasies in which House, Tree, and Person must all be gifted with speech are qualitatively rated, as validation. Sex differences in scores and themes are noted. Symbolic roles of House and Tree are discussed. Productions of individuals seen in counseling are also validating.

Ambiguity of picture and personality factors in fantasy production elicited. SIDNEY W. BIJOU, *University of Washington*, and DOUGLAS T. KENNY, *University of British Columbia*.

The hypothesis of a direct relationship between the ambiguity properties of elicited TAT pictures and extent of personality factors revealed in the fantasy elicited was tested. Two measures of stimulus ambiguity were related to scaled values of personality factors judged to be contained in the fantasy productions.

The semantic validity of TAT interpretations. BEVERLY FEST DAVENPORT, *University of Southern California*.

Interpretative statements drawn from typical TAT interpretations were studied in order to dis-

cover whether or not they could be used to discriminate between individuals with any degree of reliability, and how factors such as ambiguity and universality might influence the interpretative process. Observations were made concerning the habits of interpreters in using these statements.

The Auditory Apperception Test. LOUIS C. BERNADONI and THOMAS S. BALL, *Branch United States Disciplinary Barracks, Lompoc.* (Introduced by HARRY F. PERCTVAL)

After being presented with sound effects in either continuous or interruptive sequences, the subject is asked to integrate the stimuli as the elements of a dramatic story and thus projects his personality. The test's unique qualities lie in its probing of auditory imagery with exceptionally vivid stimuli in a temporal sequence and in the relative simplicity of interpretation.

Rorschach indications of delinquent characteristics. ANNA Y. MARTIN, *Highlands University.*

Personality Structure: Of the 85 Rorschach protocols studied, 45% show a pattern of introversion; 42% show personality development to be in a transition stage. **Intellectual Aspects:** Range, from mentally deficient to superior; 58% average; 26% dull normal. **Emotional Aspects:** (a) Lack of constriction, (b) inner control greater than outer control, (c) few signs of anxiety or of tension, (d) signs of compulsion, (e) no signs of neuroses.

The Rorschach examination and general intelligence. SYDNEY SMITH, *Arizona State College.*

The Wechsler-Bellevue and the Rorschach examination were administered to 60 subjects. Specific Rorschach scoring factors were correlated with the various subtests on the Wechsler-Bellevue to determine the extent to which the Rorschach examination can predict psychometric intelligence. Whole responses, original responses, and the productive capacity of the subject appeared to be the most significant indicators of intelligence.

Hypnosis as a projective technique. WARREN W. WILCOX, *Portland State Extension Center, Portland.*

Hypnosis has been employed as a projective technique with the aid of a tape recorder. Hypnosis was induced by a hypnotic record which also presented the subject with an ambiguous unstructured situation which called for elaboration. Responses were recorded and furnish a basis of comparison with unhypnotized subjects. Study of 25 subjects

reveals that unconscious material is readily available by this method. Hypnosis is a versatile tool as a projective technique, but requires standardization.

Communication and rapport in clinical testing.

DAVID COLE, *Occidental College.*

Traditional approaches to rapport building in clinical testing have been via the means of praise and encouragement. This author has applied the recent findings in psychotherapy to build a testing procedure wherein the aim is to communicate to the subject that his feelings regarding the test are recognized and appreciated. Successful application in a variety of testing situations is reported.

Psychodiagnostics II

ARTHUR BURTON, *Chairman*

The conventions of intelligence testing. ALICE W. HEIM, *Psychological Laboratory, Cambridge, England, and Visiting Fellow, Stanford University.*

The suggestion is made that contemporary psychometricians tend to oversimplify the psychological issues involved in intelligence testing. Evidence for this view is offered from three of the writer's experiments, the first on practice effects, the second on "speed versus power," and the third on adaptation to level of difficulty. All these indicate that flexibility of interpretation may prove more fruitful than the current rigidity.

The relationship between the F scale and intelligence. THOMAS S. COHN, *Santa Barbara College, University of California.*

An investigation of the relationship between F-scale items and intelligence was carried out using two college samples. Item analysis revealed that the F-scale items may be interpreted in terms of susceptibility to clichés rather than to deep-rooted personality traits.

The relationship between diagnoses and extreme subscore deviations on the Wechsler-Bellevue. STANLEY BENSON and KATHERINE BRADWAY, *Stanford University Hospitals.*

To assess the relationship between extreme Wechsler subtest scores and diagnosis, chi-square comparisons were made of extreme mean deviations, dichotomizing the deviations as belonging or not belonging to each of eight overlapping diagnostic categories. The results indicate the more sensitive

subtests and the degree of certainty with which certain differential diagnoses can be made.

A non-intellectual test of intelligence. HARRISON G. GOUGH, *University of California, Berkeley*.

A special pool of personality inventory items having theoretical and/or intuitional relevance to the assessment of intellectual efficiency was assembled. A scale was developed by checking the items empirically against standard measures of intelligence in four high school samples. Eight cross-validated sub-samples ($N = 1,121$) yielded a median r of .475. Two graduate student samples gave coefficients of .42 and .44.

Relationship of WISC scores to group test measures of intelligence and reading. GRACE THOMPSON ALTUS, *Santa Barbara County Schools*.

The Wechsler Intelligence Scale for Children (WISC), California Test of Mental Maturity (CTMM), and Progressive Reading Test were given to a representative sample of 55 junior high students. The correlation between WISC and CTMM IQ's was .81, between WISC verbal expectancy grade and reading grade, .83 holding age constant. Validity of the WISC in comparable school settings seems indicated.

A rationally constructed MMPI scale to measure dependence. LESLIE NAVRAN, *Stanford University*.

The construction of a 57-item Dependence Scale for the MMPI is described. Initial findings ranked samples of graduate students, normals representing the general population, and neuropsychiatric patients from least to most dependent, in the order named, with significant differences between each group. A civilian ulcer group scored significantly higher than a naval ulcer group. Theoretical implications are discussed.

Delinquent vs. nondelinquent performance on the Porteus Qualitative Maze Test. RICHARD F. DOCTOR, *Stanford University*. (Introduced by C. L. WINDER)

The Maze Test was given to 60 delinquent and 60 non delinquent boys. The records were scored for qualitative errors, i.e., cutting corner, crossing line, etc. The delinquents' mean was 45, nondelinquents' 25. This difference is highly significant, yielding a critical ratio of 5. Porteus' claims were corroborated, and further standardization is justified.

A comparison of the clinical data yielded by a test of symbol arrangement with other findings of two attempted suicide patients. THEODORE C. KAHN, *U. S. Air Force Hospital, Parks Air Force Base*.

Forty objectively defined clinical factors were identified by 5 tests: 37 on the Symbol Arrangement, 25 on the Rorschach, 17 on the MTAT, and 12 on other tests. There was general agreement among test findings except that 13 factors were identified on the Symbol Arrangement Test which were not indicated by any other test but were substantiated by case histories.

Psychological services in determining adoptability through the functions of a public agency. LAWRENCE C. SCHREIBER, *Los Angeles County Bureau of Adoptions*. (Introduced by KATHLEEN STENDEL)

Presenting an administrator's convictions of the psychologist's importance in adoptions programs through the services of public agencies authorized under 1947 California Enabling Legislation. Experience in this particular field covers a period in Los Angeles County of but three years but is significant in its successful earlier placement of infants and comprehensive consideration of children heretofore not served or arbitrarily determined as poor adoption risks because of inadequate psychological or psychiatric attention.

Correlated professional services in adoption agency practice. KATHLEEN STENDEL, *Los Angeles County Bureau of Adoptions*.

Brief description of four cases of children studied for adoption by a public agency. Cases illustrate certain professional procedures in problematic behavior which developed before and after placement and during the year of supervision until legal adoption became final. Manifest behavior, psychological evaluation, and psychiatric diagnosis, treatment, and recommendation are discussed. Follow-up observations are stated for each case.

General Clinical

MAUD A. MERRILL, Chairman

A study of clinical judgment. BERTRAM R. FORER and RUTH S. TOLMAN, *VA Mental Hygiene Clinic, Los Angeles*.

Thirty psychologists made judgments on the clinical usefulness of Sentence Completion Test items and indicated the certainty they felt in mak-

ing each judgment. Kind of content rather than form of an item (first or third person) influences judgments of its value. Clinicians vary consistently in confidence. Confidence is associated with positive evaluations of clinical usefulness, extremeness of judgment, and independence.

An evaluation of the psychological processes of the neurosyphilitic: IV. Wechsler "deterioration" indices in a graded brain damage population. IRLA LEE ZIMMERMAN, ELLEN B. SULLIVAN,* ROY M. DORCUS, THOMAS H. STERNBERG, and MURRAY C. ZIMMERMAN, *University of California, Los Angeles*.

The Wechslers of three groups of neurosyphilitic patients: asymptomatic, general paretic, and general paretic with psychosis, were compared with those of a control group of syphilitic patients without central nervous system involvement, by utilizing various indices of mental deterioration developed for use with the Wechsler-Bellevue Scale. Results indicate that the measures utilized varied greatly in screening ability.

Relationship between degree of incapacity and personal and social adjustment of patients with spinal cord injury. CHARLYNE T. STORMENT-SEYMOUR, ERNEST BORS, F. HAROLD GIEDT, and HERBERT GOLDENBERG, *Veterans Administration Hospital, Long Beach*.

Degree of physical incapacity and personal and social adjustment of twenty male patients with spinal cord injury were studied. Two matched groups, ten quadriplegic, ten paraplegic, compared by (a) social adjustment scale, (b) personal adjustment scale based on Rorschach records. Quadriplegics obtained best social adjustment ratings, personal adjustment trend same direction. Hypothesis: greater physical incapacity results in lowered aspiration level, fewer resultant frustrations.

A study of intellectual deterioration in a case of prolonged cerebral anoxia. JAMES H. SHARP, *Veterans Administration Hospital, Long Beach*. (Introduced by HAMILTON M. MOODY)

The study presents a somewhat detailed evaluation of a single case of gross, diffuse brain damage resulting from prolonged cerebral anoxia. While impairment is extensive and severe, there is a remarkable retention of some of the presumably more abstract functions, and no true aphasia, agnosia, or

apraxia can be demonstrated. There is, however, a consistent and near-complete loss in the ability to synthesize meaningful and appropriate gestalts from their constituent elements.

Testing patterns in a case of acromegaly. HAROLD GEIST and RALPH CRAWSHAW, *Mare Island Naval Hospital, Mare Island*.

A battery of intelligence and personality tests was administered to an acromegalic patient (a disease which is an eosinophilic adenoma of the anterior pituitary causing enlargement of the bones and joints and disfigurement). Test result in terms of past (previous to disease) and present history will be discussed with special reference to perception of the self and wish fulfillment.

Communication disorders of children with impaired hearing and the role of interpersonal relations. BORIS V. MORKOVIN, *University of Southern California*.

Disruption of the child's interpersonal relations due to sudden deafness blocks his communication and may give rise to a psychogenic overlay. Under the influence of new communicative climate and relations, the child becomes receptive to learning language techniques (speech-reading, auditory training, and speech), and willing to use them in group participation.

The deeper dilemmas of the psychologist in private practice. E. PARL WELCH, *Los Angeles*.

Restricting psychological practice to medical referrals and clearances dissolves the "impossible dilemma" (Report of Ad Hoc Committee on Relation of Psychology to the Medical Profession) but produces four more: (a) choice of unprejudiced, competent physicians, (b) preserving autonomy in collaboration, (c) use of psychodiagnostic investigations, and (d) the problem of building a practice and livelihood. Suggested solution: a medically related, but therapeutically autonomous practice.

Medical acceptance or rejection of the clinical psychologist in private practice. M. J. FREEMAN, *Los Angeles*.

A study was made to determine the extent to which medical doctors understand and make use of the work of the clinical psychologist in private practice. One hundred doctors in various sections of Los Angeles County were interviewed. The results showed that very few doctors are aware of the fact that the clinical psychologist's university training and internship almost equaled that of their own.

Very few of them were aware of the quality and extent of the psychodiagnostic and psychotherapeutic skills of the clinical psychologist.

The first two years of a private psychological service center. MAURICE RAPKIN, STEWART B. SHAPIRO, and DAVID GROSSMAN, *Los Angeles Psychological Service Center*.

This report is being presented because of possible interest to psychologists in alternatives to independent private practice in offering psychological services to the community. The following will be discussed: history and purposes of the Center; organizational structure (personnel, qualifications, relation to psychiatrists, staff meetings, fee policy); patient population; standard intake procedure; some special problems (research, medical clearance, etc.).

The dynamics of listening. JERRY R. SOMMER, BERNARR MAZO, and GEORGE F. J. LEHNER, *University of California, Los Angeles*.

The present report is one of a series of studies attempting to investigate the process of listening, particularly as a therapist listens to a patient. Different therapists were presented selections of a tape-recorded therapy interview with the original therapist's responses deleted, and asked to respond to the question, "What has the patient told you?" Therapists responses were analyzed in terms of (a) amount of listening, (b) content categories, (c) interpretative versus descriptive responses, and (d) therapist-patient verbal contradictions.

Educational Psychology

HOWARD R. TAYLOR, Chairman

Performance of children in a discrimination problem as a function of symbolic guidance, delay of reward, and mental ability. ALFRED JACOBS, *University of Southern California*.

Mentally defective children were compared with institutionalized children of normal intelligence in learning which of three pushbuttons was correct for each of three ambiguous visual stimuli. Hypotheses were tested with respect to the effects on performance of delay in reward, and of designating the ambiguous stimuli by names supplied by the experimenter to the subjects.

A comparison of the attitudes of teachers nominated as "outstandingly superior" and teachers nomi-

nated as "outstandingly poor" by their principals.

EDWIN WANDT, *American Council on Education*.

Principals nominated "superior" and "poor" elementary, English-social studies, and mathematics-science teachers. Comparisons were made between the attitudes of these "superior" and "poor" groups. In each field, "superior" teachers were very significantly more favorable in their attitude toward pupils and significantly more favorable in their attitude toward administrators. There were no significant differences in attitude toward adult non-administrative groups.

Psychotherapeutic approaches to teaching. DAVID GROSSMAN and VERNON B. GREDING, *Los Angeles Psychological Service Center*.

To ascertain if insight and expression of feeling can be increased by classroom psychotherapeutic techniques without sacrificing academic knowledge, pre- and postsemester testing was employed. Approaches included writing emotional reactions to textbook material, four practice counseling sessions, "buzz" sessions, and student-centered discussions. Most students felt they benefited therapeutically and academically. Feeling expression was significantly increased but not insight.

An investigation of the relationship between teaching effectiveness and the teacher's attitude of acceptance. HAROLD J. REED, *University of Southern California*.

One hundred and four secondary school teachers participated in a study to determine the relationship between teaching effectiveness and an attitude of acceptance as measured by a sentence completion test. Student evaluations were found to be reliable measures of teaching effectiveness. Reliability coefficients for scoring the SCT ranged from .84 to .95. The SCT identified correctly 75% of the effective and ineffective teachers.

Factors influencing graduate student morale. JAMES M. HOLT and GEORGE F. J. LEHNER, *University of California, Los Angeles*.

A questionnaire study of factors influencing graduate student productivity and work satisfaction (morale) indicates concern with seven major areas: (a) relationships with faculty, (b) relationships with fellow students, (c) relationships with public, professional, and academic groups; problems related to (d) nature of psychology, (e) departmental policies, (f) financial difficulties, and (g) feelings

of isolation from "real-life" activities. Significance of results for students, faculty, and administration will be discussed.

A long range comparison of IQ constancy and physical measurement. WILLIS C. DRISCOLL, *Medical Field Service School, Fort Sam Houston.*

Constancy of intellectual and physical growth covering a 10-year period was evaluated in a relatively permanent and homogeneous group. Mean correlations were .84 for height and weight and .71 for intelligence with a mean time interval of 59 months. Prediction of future height and weight would be 46% better than chance, and of IQ 30% better than chance.

A technique for estimating academic types. EUGENE I. BURDOCK and DUANE F. KELSO, *University of California, Los Angeles.*

A technique is described and illustrated for the estimation of academic types by examination of an item matrix of responses to the MMPI and the Strong Vocational Interest Inventory. Values of 1, $\frac{1}{2}$, 0 were assigned respectively to the response categories True, Cannot Say, False on the MMPI and Like, Indifferent, Dislike on the Strong. An item matrix was constructed.

A system for evaluating counseling records. EDWARD M. ALKIRE, *VA Advisement and Guidance Section, Los Angeles.*

Validation of a System for Evaluating Counseling Records in which approximately five hundred cases were used. Comparisons were made between the rehabilitated and discontinued cases selected from the Veterans Administration Rehabilitation program. Physical qualifications and personality characteristics of the veterans were considered in approximately one-half of the cases. A positive relationship exists between rehabilitation, the information used and the adequacy of its use.

Projecting and abstracting: a theoretical approach.

WILLIAM H. PEMBERTON, *College of Marin.*

A search for a simplified psychological theory useful to experimentalists, clinicians, and educators led to analysis of Alfred Korzybski's formulation of *abstracting* as a fundamental characteristic of life. Elaboration by examples of the projective nature of the abstracting process (called by the author "prostrating") accounts for human mis-evaluations ranging from the so-called normal to the psychopathological.

SYMPOSIA

Rorschach Prognostic Rating Scale

BRUNO KLOPPER, Chairman

Participants: FANNIE MONTALTO, WAYNE WISHAM, HAROLD GIEDT, and PAULINE VORHAUS

(Sponsored by the Society for Projective Techniques)

Counteracting Popular Misconceptions about the Practicing Psychologist

DOUGLAS HAYGOOD, Chairman

Participants: Members of the Los Angeles Society of Clinical Psychologists in Private Practice and the audience

(Sponsored by the Los Angeles Society of Clinical Psychologists in Private Practice)

The Relationship of the Clinical Psychologist to the Psychiatrist

IRVING STONE, Chairman

Participants: ANNA M. SHOTWELL, MARVIN R. SHAFER, ROBERT B. VAN VORST, and J. C. DILLON and L. H. GOULD (guest psychiatrists)

(Sponsored by the Association of Clinical Psychologists in California State Civil Service)

Successful Psychotherapy—What Is It?

GEORGE MUENCH, Chairman

Participants: FRED W. BRADSHAW (guest psychiatrist), J. F. T. BUGENTAL, DOROTHY C. CONRAD, JEROME FISHER, and H. E. SCARBROUGH

Group Therapy, a New Setting for Systematic Research

GEORGE R. BACH, Chairman

Participants: WALTER JOEL, TIMOTHY LEARY, MARGARET PAUL, VERN KALLEJIAN, and H. V. INGHAM

Systems Research

J. L. KENNEDY, Chairman

Participants: W. C. BIEL, ALLAN NEWELL, R. L. CHAPMAN, ARNOLD SMALL, CLIFFORD MORGAN, and EDWARD KEMP

PROCEEDINGS OF THE TWENTY-THIRD ANNUAL MEETING OF THE EASTERN PSYCHOLOGICAL ASSOCIATION

CHARLES N. COFER, *Secretary*

University of Maryland

THE Eastern Psychological Association held its twenty-third annual meeting on March 28 and 29 at the Chalfonte-Haddon Hall in Atlantic City, New Jersey. A total of 1,168 persons was registered, including 593 members, 368 guests, and 207 APA members who joined EPA at the meeting. The membership of the Association now is 1,967, as compared to 1,780 a year ago.

Local arrangements for this meeting were made by Roy B. Hackman (Registration and Projection), Karl Heiser (Placement), G. Gorham Lane (Publicity), and I. Hammond Cabbage (Exhibits). The Presidential Address was presented by Frank A. Beach and was entitled, "The De-Scent of Instincts." The Program Committee, consisting of J. M. Bobbitt, chairman, W. C. H. Prentice, and P. B. Courtney, scheduled 130 papers, three symposia, and one showing of films. A number of other special meetings were held.

Some of the significant business items transacted at either the Annual Business Meeting or at the Board of Director's Meeting follow:

1. It was reported that Neal E. Miller was elected President (1952-53) and that Stuart W. Cook and Fred S. Keller were elected to full terms (1952-55) on the Board of Directors. The unexpired portion of Dr. Miller's term on the Board is to be completed by Carl Pfaffmann. G. Gorham Lane was elected Secretary for three years (1952-1955).

2. Appointments and reappointments were made as follows: Local Arrangements Committee for 1953, E. B. Newman, Chairman; Program Committee, Eliot Stellar; Representative to Council, AAAS, T. C. Schneirla; Membership Committee, Walter C. Stanley; Auditing Committee, L. Stolurow and J. McV. Hunt; Elections Committee, F. A. Beach and Alvin Liberman; Representative to the American Academy of Political and Social Science, J. C. Diggory and S. Asch.

3. The Association voted to hold its 1954 meeting in New York City at the Hotel New Yorker and its 1955 meeting in Philadelphia at the Hotel Benjamin Franklin. The 1953 meeting will be held at the Hotel Statler in Boston on April 24 and 25.

4. The Association's Committee on Academic Freedom was, on its own recommendation, discharged, since the Committee report indicated that matters of academic freedom could most properly be handled by the appropriate APA committee.

5. An amendment to the By-Laws was approved, providing that the election ballot must be mailed to the membership not less than 28 (instead of 60) days prior to the annual meeting.

6. Eighteen non-APA applicants were approved for membership. Four were rejected.

7. A motion was adopted expressing the appreciation of the Association to the retiring Secretary for his work.

8. It was voted to increase substantially the financial support of the Secretary's Office and to transfer much of the clerical work of the Treasurer to the Secretary.

9. The Program Committee asked for instructions concerning the policy which should guide it in accepting papers. The Board of Directors instructed the Committee to follow the policy of accepting papers on the basis of their scientific merit, rather than in terms of their estimated interest. The Board increased the permitted length of abstracts to 500 words to provide the Committee with a better basis for making its judgments, and it provided for the possibility of increasing the length of the meeting to three days in 1954 and 1955 should experience next year suggest the desirability of such a step.

10. The Association voted to continue its offer for another year of \$200 to the APA for the employment of a journalist in a study of publicity for psychological conventions.

11. The Association voted to offer the APA \$200 for the study of the value of having an APA placement representative function at regional meetings.

12. The Association voted to express its appreciation to the Local Arrangements Committee for their work in arranging the convention.

13. The interim report and the budget presented by the Treasurer were approved. His audited financial statement for the fiscal year 1951-1952 follows:

FINANCIAL STATEMENT AS OF MAY 1, 1952

For the Fiscal Year 1951-52

INCOME

Membership Dues	
Dues for current year, 1951-52	\$1431.00
Arrears for 1950-51	129.00
Arrears for earlier years	23.00
Dues paid in advance	20.00
Guest fees and sale of programs.....	389.50
Interest on savings account	44.52
Exhibitors fees	292.00
Total Income	\$2329.02

EXPENDITURES

Publication of Proceedings	\$ 170.25
Office of the Secretary	536.50
Office of the Treasurer	278.61
Printing, supplies, postage	663.25
Traveling expenses of officers	54.37
Program Committee	33.81
Expenses at Annual Meeting	191.36
Miscellaneous	14.56
Total Expenditures	1942.71
Surplus for 1951-52	386.31

BALANCE SHEET

Cash: Bank of New York	\$2521.40
New York Savings Bank	2254.92
Total Cash	\$4776.32
Capital: As of May 1, 1951	\$4390.01
Surplus for 1951-52	386.31
Total Capital	\$4776.32

We, the Auditing Committee for the year 1951-52, have examined the records in connection with this statement and find it to be a true and correct account.

Signed
WILLIAM E. KAPPAUF LAWRENCE M. STOLUROW

PROGRAM

Clinical Psychology I

H. MAX HOUTCHENS, *Veterans Administration*,
Chairman

Hostility in chronic neurological patients. PETER J. NAPOLI and LAWRENCE SWEENEY, *Franklin D. Roosevelt VA Hospital*.

Perceptual sensitization to sexual phenomena in paraplegic patients. HAROLD LINDNER, *McGuire VA Hospital*.

Psychological studies on patients undergoing non-convulsive electro-stimulation treatment (EST). M. BERAN, J. C. PERKINS, and R. W. SCOLLON, *VA Hospital, Lyons, N. J.*

The effect of electroshock therapy on the fluctuation rate of ambiguous perspective figures. V. R. FISICHELLI, F. V. ROCKWELL, and L. CLARKE, *Hunter College and Payne Whitney Clinic*.

The effects of varied activities on the postelectroshock EEG. LILA GHENT, *New York University College of Medicine*.

The relationship of disruption of personality during electroshock treatment to psychiatric improve-

ment. E. R. CAHEN and J. D. HOLZBERG, *Connecticut State Hospital, Middletown*.

A preliminary study in a behavioral analysis of the psychotherapeutic process. EDWARD J. MURRAY, *Yale University*.

An experimental investigation of contrasting social atmospheres in group psychotherapy with chronic schizophrenics. J. L. SINGER and G. D. GOLDMAN, *Franklin D. Roosevelt VA Hospital*.

Social Psychology

DOUGLAS COURTNEY, *Institute for Research in Human Relations*, Chairman

Factorial study of the rated behavior of group members. A. S. COUCH and L. F. CARTER, *University of Rochester*.

The influence of individual members on the characteristics of small groups. WILLIAM HAYTHORN, *University of Rochester*.

Effect of method of response on interaction of observer pairs. BERNARD MAUSNER, *New York University*.

Some determinants of accuracy of social judgments among Army recruits. RICHARD CHRISTIE, *New York University*.

Is there a "Law of Primacy" in persuasion? W. MANDELL and C. I. HOVLAND, *Yale University*.

A study of the "sleeper" effect in opinion change. WALTER WEISS, *Yale University*.

Factors affecting the resistance to change of group-anchored attitudes. H. H. KELLEY and E. H. VOLKART, *Yale University*.

The effects of directional bias of context on the responses to attitude items. SHELDON S. ZALKIND, *Richardson, Bellows, Henry and Company*.

Applied Psychology

ARTHUR W. AYERS, *University of Maryland*,
Chairman

The spectral density approach to a perceptual motor task. EZRA S. KRENDEL, *The Franklin Institute*.

The effect of a prefilm test on learning from an educational sound motion picture: An experiment. J. J. STEIN, *Pennsylvania State College*.

The development and use of scales for the description of supervisory behavior. EDWIN A. FLEISHMAN, *Lackland Air Force Base*.

The self-concept in proficiency measurement: Certain relationships among job performance self-estimates, attitudes toward the job, and proficiency measures. H. J. HAUSMAN and H. H. STRUPP, *Bolling Air Force Base*.

A universal criterion rating scale for the validation of a differential aptitude test screening battery. M. S. VITELES and W. W. WILKINSON, *University of Pennsylvania*.

The determination of criteria of readability. A. M. KERSHNER and R. C. HACKMAN, *The Personnel Research Center and the University of Maryland*.

Accuracy of knob-setting (bisection of angular extents) as a function of friction and of inertia. B. WEISS and S. D. S. SPRAGG, *University of Rochester*.

Accuracy of tactual discrimination of letters, numerals, and geometric forms. T. R. AUSTIN and R. B. SLEIGHT, *The Johns Hopkins University*.

Vision

W. C. H. PRENTICE, *Swarthmore College*,
Chairman

A study of pupillary diameter and the decrease of critical flicker frequency after 50 years of age. JOHN A. VOLLENWEIDER, *Fordham University*.

Influence of exposure time upon the perception of visual flicker. W. S. BATTERSBY and R. JAFFE, *New York University College of Medicine*.

Figural after-effects of colored stimuli, with and without brightness difference. J. E. HOCHBERG and C. B. HOCHBERG, *Cornell University*.

An experimental determination of some iso-color lines in color deficient vision. R. M. HALSEY and A. CHAPANIS, *The Johns Hopkins University*.

Monocular mixture of pure hues. L. M. HURVICH and D. JAMESON, *Eastman Kodak Company*.

The effects of pre-adaptation on color adaptation-time in the *Ganzfeld*. W. TRIEBEL and J. E. HOCHBERG, *Grasslands Hospital and Cornell University*.

Monocular movement parallax thresholds as a function of needle offset and speed of stimulus movement. R. T. ZEGERS, S.J., and H. V. POLAND, *Fordham University*.

Human Learning I

JAMES E. DEESE, *The Johns Hopkins University*,
Chairman

A statistical model for free verbal recall. G. A. MILLER and W. J. MCGILL, *Massachusetts Institute of Technology*.

The effect of reinforcement on the alternation of guesses. J. B. HUGHES II, *University of Pittsburgh*.

Perception of the statistical structure of a random series of binary symbols. RAY HYMAN and H. W. HAKE, *The Johns Hopkins University*.

The information channel-capacity of the human operator. J. C. R. LICKLIDER, *Massachusetts Institute of Technology*.

The assimilation of information as a function of the rate of presentation of information. IRWIN POLLACK, *Human Resources Research Laboratory*.

Hypotheses relevant to communications research. C. R. CARPENTER, *The Pennsylvania State College*.

Context and stimulus patterning in learning. ROBERT B. MILLER, *American Institute for Research*.

Phenomena characteristic of high degrees of learning. EDGAR L. SHRIVER, *The American Institute for Research*.

Animal Learning I

H. H. KENDLER, *New York University*,
Chairman

The effect of repeated conditioning-extinction upon operant strength. D. H. BULLOCK and W. C. SMITH, *University of Buffalo*.

The reinforcing effect of auditory stimuli on operant behavior in the human infant. O. LINDSLEY and M. LINDSLEY, *Harvard University*.

Discrimination of reinforcement conditions produced by repeated conditioning and extinction. SUE RABAN, *Columbia University*.

Effect of degree of food deprivation before satiation on the performance of a bar-pressing habit at "zero" hunger drive. MITCHEL M. BERKUN, *Yale University*.

The effect of motivation on extensity of learning. JOSEPH J. GREENBAUM, *Wesleyan University*.

ACTH, anxiety, and avoidance learning. M. H. APPLEZWEIG and F. D. BAUDRY, *Wesleyan University*.

A comparison of light-shock and sound-shock avoidance training when presence of CS during responding is controlled. W. C. STANLEY and J. A. WHITTENBURG, *Brown University and University of Maryland*.

Clinical Psychology II

J. ARTHUR WAITES, *VA Hospital, Perry Point, Md.*,
Chairman

A comparison of Basic Rorschach Scores with judgments of adjustment based on clinical case material. R. L. NEWTON and H. W. GOODMAN, *University of Pittsburgh, Western Psychiatric Institute and Clinic, and Veterans Administration*.

The validity of selected Rorschach signs of anxiety, compulsiveness, and depression. T. G. ROULETTE and G. M. GUTHRIE, *The Pennsylvania State College*.

The validity of selected Rorschach signs of emotional stability, dominance, submissiveness, and cyclothymia. G. P. SIDNEY and G. M. GUTHRIE, *The Pennsylvania State College*.

Comparison of a schizophrenic and a normal subject, both rated by clinicians as well-adjusted on the basis of "blind" Rorschachs. R. M. HAMLIN and R. L. NEWTON, *Western Psychiatric Institute and Clinic*.

The psychological diagnosis of schizophrenia. MILTON S. GURVITZ, *Hillside Hospital and Adelphi College*.

The prediction of "Ceased Keeping Appointment" behavior from the Rorschach test. B. KOTKOV and A. MEADOW, *University of Buffalo*.

The effects of pre-operative stress upon Rorschach factors alleged to be signs of anxiety. LEONARD BERNSTEIN, *Fordham University and Brooklyn VA Hospital*.

A comparison of the personality structures of patients with idiopathic epilepsy, hysterical seizures, and brain tumors. GEORGE D. GOLDMAN, *Franklin D. Roosevelt VA Hospital and College of the City of New York*.

Measurement I

RAY C. HACKMAN, *University of Maryland*,
Chairman

Preschool performance on the Stanford-Binet (revised) and the Wechsler Intelligence Scale for children. K. CARTEE and F. O. TRIGGS, *University of Maryland*.

The use of interpersonal correlations as indices of validity. W. J. E. CRISSEY and H. VON SCHELLING, *Queens College and Medical Research Laboratory, New London*.

A simple technique for unblocking test validation studies. THOMAS L. BRANSFORD, *New York State Department of Civil Service*.

A new formula and tables for the serial correlation coefficient. NATHAN JASPEN, *The Pennsylvania State College*.

A validity study of the general aptitude test battery of the United States Employment Service. M. J. SEITZ and G. G. LANE, *Delaware State Employment Service and the University of Delaware*.

The evaluation of rational decisions. I. LORGE, J. DAVITZ, K. HERROLD, and D. FOX, *Columbia University*.

An empirical evaluation of the latent class model of latent structure analysis. BERT F. GREEN, JR., *Massachusetts Institute of Technology*.

Animal Learning II

NEAL E. MILLER, *Yale University*, Chairman

The effects of deprivation of visual form definition upon the rate of learning a visual discriminatory task in the ring dove. ARTHUR I. SIEGEL, *American Museum of Natural History and Queens College*.

The effects of early social stimulation on mating responses in adult male rats. J. KAGAN and F. A. BEACH, *Yale University*.

The effect of restricted environment upon maternal behavior. BERNARD F. RIESS, *American Museum of Natural History and Hunter College*.

Differences in social behavior between dogs reared in "free" and "restricted" environments. W. R. THOMPSON and W. HERON, *McGill University*.

An investigation of the effect of early exploratory experience on irrelevant-incentive learning. ROBERT VINEBERG, *New York University*.

Relation of hunger deprivation to random activity. B. A. CAMPBELL and F. D. SHEFFIELD, *Yale University*.

Exploratory behavior as a function of "similarity" of stimulus situations. K. C. MONTGOMERY, *Cornell University*.

Reinforcement as a function of drive reduction. F. D. SHEFFIELD, T. B. ROBY, and B. A. CAMPBELL, *Yale University and U. S. Air Force*.

Personality

F. H. SANFORD, *American Psychological Association*, Chairman

Some correlates of insight. M. J. FELDMAN and D. BULLOCK, *University of Buffalo*.

An experimental investigation of the consistency of stress tolerance. MURRAY S. STOPOL, *Columbia University*.

The interrelationships of several measures of rigidity under varying conditions of security. DEE G. APPELZWEIG, *Smith College*.

An experimental investigation on the relationship between the *Einstellung* effect and "variability of response." RONALD HENRY FORGUS, *Cornell University*.

Development of group measures of level of aspiration. H. N. RICCIUTI and D. G. SCHULTZ, *Educational Testing Service*.

Level of aspiration measures and college achievement. D. G. SCHULTZ and H. N. RICCIUTI, *Educational Testing Service*.

Personality and background characteristics of volunteers and non-volunteers. H. H. DAVIDSON and L. P. KRUGLOV, *City College of New York*.

Permissive child-rearing and adult role behavior in children. HARRY LEVIN, *Harvard University*.

Relationships between child rearing practices and children's behavior. J. R. WITTENBORN, *Yale University*.

Physiological Psychology

CLIFFORD T. MORGAN, *The Johns Hopkins University*, Chairman

An experimental study of the effects of Dexedrine (d-amphetamine sulfate) on motor and mental performance and some factors in mood. J. C. BALLOCH, T. A. LA SAINTE, and J. M. ROBINSON, *Fisk University and Meharry Medical College*.

The effect of electro-convulsive shock on frustration—instigated behavior in the rat. R. S. FELDMAN and C. C. NEET, *University of Massachusetts*.

The effect of electro-convulsive shock on an inhibited conditioned response in the albino rat. C. HAMILTON and R. A. PATTON, *University of Pittsburgh, Western Psychiatric Institute*.

Role of the cerebral cortex in tactual form discrimination in the rat. J. P. ZUBEK, *McGill University*.

Effects of temporal lobe ablations on visually guided behavior in primates. MORTIMER MISHKIN, *Institute of Living*.

Intellectual effects of temporal lobe damage in man. BRENDA MILNER, *University of Montreal and Montreal Neurological Institute*.

A study of the preferences of normal and adrenalectomized albino rats for ten different concentrations of sodium chloride. ARTHUR E. HARRIMAN, *Cornell University*.

An experimental investigation into the interpretations proposed to account for the development of salt preference in adrenalectomized rats. ARTHUR E. HARRIMAN, *Cornell University*.

Perception

JAMES J. GIBSON, *Cornell University*, Chairman

The effects of interval and duration of visual stimuli upon the time error. GERALD J. FOX, *Fordham University*.

Figural displacements as a function of the relative position of body and object. J. H. BRUELL and A. G. GOLDSTEIN, *Clark University*.

The effect of motor activity on the autokinetic phenomenon. ALFRED E. GOLDMAN, *Clark University*.

After-effects of prolonged inspection of apparent movement. NORMAN H. LIVSON, *Worcester State Hospital*.

The effect of unit-formation factors and developmental level on transposition. C. E. STULL, *The Training School, Vineland, N. J.*

The accuracy and variability of adjusting the perpendicular to a straight line. J. M. WHEELER and J. VOLKMANN, *Mount Holyoke College*.

The effect of remote contours on the apparent tilt of lines. T. MARILL and E. G. HEINEMANN, *Cornell University*.

SYMPOSIA

Predoctoral Training in Psychotherapy

SEYMOUR G. KLEBANOFF, Chairman, NEAL E. MILLER, PAUL EISERER, SAMUEL KUTASH, OSKAR DIETHELM, and JOHN DOLLARD

The Meaning of Projection

JOHN E. BELL, Chairman, EUGENIA HANFMANN and SOLOMON MACHOVER

(This symposium was sponsored jointly with the Society for Projective Techniques.)

Critique of Current Practices and Problems in Mental Deficiency

E. LOUISE H. PORTER, Chairman

L. N. YEPSEN: Psychologist's responsibilities in determining mental deficiency.

S. B. SARASON: The status of psychological training and research in mental deficiency.

JOSEPH JASTAK: Interpreting mental deficiency.

Presidential Address and Annual Business Meeting

CARL I. HOVLAND, Chairman

Presidential Address: The De-Scent of Instincts. FRANK A. BEACH.

Clinical Psychology II

M. J. GARRISON, *University of Pennsylvania*, Chairman

The relationship of terror dreams to neuropsychiatric fitness for Naval duty. HALSEY M. MACPHEE, *University of Delaware*.

A study of the interaction between ego-involvement and test anxiety. G. MANDLER, S. B. SARASON, and P. C. CRAIGHILL, *Yale University*.

Some correlates of test anxiety. S. B. SARASON and G. MANDLER, *Yale University*.

Rorschach movement responses following motor inhibition and hyperactivity. J. L. SINGER, J. MELTZOFF, and G. D. GOLDMAN, *F. D. Roosevelt VA Hospital and VA Mental Hygiene Clinic, Philadelphia*.

Analysis of distortions of Bender-Gestalt figures as indices of psychosexual disturbances. CLAIRE M. VERNIER, *Martinsburg VA Center*.

An analysis of frustration behavior in a puzzle-solving situation in relation to scores on the Rosenzweig Picture-Frustration study. HARRY BORNSTEIN, *Fordham University*.

Comparison of human figure drawings by behavior problem and normal control boys. VIRGINIA W. EISEN, *Fordham University*.

A schedule for rating psychiatric patients on psychodynamics, manifest behavior, and complaints. M. LORR, E. RUBINSTEIN, and R. L. JENKINS, *Veterans Administration Central Office*.

Discomfort-relief quotient as a measure of tension and adjustment in schizophrenia. A. MEADOW, M. GREENBLATT, M. LEVINE, and H. C. SOLOMAN, *University of Buffalo and Harvard Medical School*.

Audition

EDWIN B. NEWMAN, *Harvard University*,
Chairman

A statistical interpretation of neural response to pairs of acoustic clicks. W. J. MCGILL and W. A. ROSENBLITH, *Massachusetts Institute of Technology and Harvard University*.

Adaptation of the ear to sound stimuli: The intensity-time relationship. P. A. KELSEY and A. I. RAWNSLEY, *Medical Research Laboratory, New London*.

Investigation of the tuning of the basilar membrane by a fatigue technique. A. I. RAWNSLEY, *Medical Research Laboratory, New London*.

Initial and chronic effects of intense pure tone stimulation when the magnitude of the initial injury is controlled. F. J. GITHLER and I. E. ALEXANDER, *Princeton University*.

The nature of loudness recruitment. J. DONALD HARRIS, *Medical Research Laboratory, New London*.

An evaluation of some recent developments in auditory theory. E. G. WEVER and M. LAWRENCE, *Princeton University*.

On the locus of pitch discrimination in the auditory system. STEPHEN E. STUNTZ, *Medical Research Laboratory, New London*.

Measurement II

DENZEL D. SMITH, *University of Maryland*,
Chairman

A study of the effect of specialized training on scores of the Kuder Preference Record. FRANCES O. TRIGGS, *University of Maryland*.

Test-retest reliability of the Kuder Preference Record from high school to college. A. BOUTON, Major, M.S.C., and F. HERZBERG, *Allegheny Vocational Counseling Center, University of Pittsburgh, U. S. Army Medical Department*.

A new test: The pictorial occupational interest survey. RALPH H. MARKUS, *Allegheny Vocational Guidance Center*.

Interest item response arrangements as it affects discrimination between professional groups. JOHN V. ZUCKERMAN, *The George Washington University*.

The importance of goal aspiration in academic success. GEORGE WEIGAND, *University of Maryland*.

Changes in Kuder Preference profiles from high school to college. F. HERZBERG and A. BOUTON, Major, M.S.C., *Allegheny Vocational Counseling Center, University of Pittsburgh, U. S. Army Medical Department*.

The relative effectiveness of interest and personality items in evaluating professional performance. HYMAN BRANDT, *American Occupational Therapy Association*.

Some properties of a personality scale to measure level of self-consciousness. DAVID R. SAUNDERS, *Educational Testing Service*.

Human Learning II

HAROLD SCHLOSBERG, *Brown University*,
Chairman

Experiments on token reward behavior of children: II. Acquisition and extinction of an instrumental response sequence. WILLIAM W. LAMBERT, *Cornell University*.

Primary stimulus generalization to a complex vocal stimulus. ROBERT W. GILMORE, *University of Pittsburgh*.

Verbal transfer of overlearned forward and backward associations. E. RAE HARCUM, *The Johns Hopkins University*.

Transfer and generalization of the inhibitory potential developed in rote serial learning. S. SHAPIRO, T. G. ANDREWS, and C. N. COFER, *University of Maryland*.

Stimulus discriminability in concept attainment. MARIAN H. BAUM, *Yale University*.

Associative factors in reasoning: The Maier hat-rack problem. C. N. COFER and S. GELFAND, *University of Maryland*.

Probability preferences in gambling behavior. WARD EDWARDS, *The Johns Hopkins University*.

Experimental Psychology

FRANCIS W. IRWIN, *University of Pennsylvania*,
Chairman

Stimulus complexity and preference value as variables in a size estimation situation. F. L. SMITH and A. H. RITTENHOUSE, JR., *University of Delaware*.

Stimulus similarity and the anchoring of subjective scales. DONALD R. BROWN, *Bryn Mawr College*.

A methodological flaw in ESP experiments. R. S. KAUFMAN and F. D. SHEFFIELD, *Yale University*.

Do incorrectly-perceived tachistoscopic stimuli convey some information? P. D. BRICKER and A. CHAPANIS, *The Johns Hopkins University*.

Neurotic conflict: A dimension in perception-personality research. PAUL R. DINGMAN, *Brattleboro Retreat*.

Multidimensional psychophysics: A new research method. T. G. ANDREWS, *University of Maryland*.

Pain scaling. PAUL SWARTZ, *Hobart College*.

Motion Picture Films

C. R. CARPENTER, *The Pennsylvania State College*,
Chairman

Irrelevant rewards and representative factors in animal learning. I. D. LORGE, A. T. POLIN, and N. N. STOCKHAMER, *Columbia University and Hunter College*.

Demonstrations in perception. WILLIAM N. ITTELSON, *Princeton University*.

A long time to grow. L. J. STONE, M. F. LANGMUIR, E. OMWAKE, and J. BOHMER, *Vassar College*.

Fears of children. Produced for the Mental Health Film Board by International Film Foundation. Written and directed by FRANCIS THOMPSON.

Farewell to childhood. Produced for the Mental Health Film Board by Herbert Kerkow, Inc. Written by FRANK BECKWITH, directed by JULIAN ROFFMAN.

Manuscript received May 14, 1952

PROCEEDINGS OF THE TWENTY-SECOND ANNUAL MEETING OF THE ROCKY MOUNTAIN BRANCH OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

LAWRENCE S. ROGERS, *Secretary*
Veterans Administration, Denver

THE Rocky Mountain Branch of the American Psychological Association held its twenty-second annual meeting with the Psychology Section of the Colorado-Wyoming Academy of Science on May 2 and 3, 1952, at the University of Colorado, Boulder, Colorado. Twenty-one papers were read and in addition a regional meeting of Psi Chi was held under the chairmanship of Dr. Anna Y. Martin of New Mexico Highlands University. A luncheon was also held by this group. At the request of the Education and Training Board of the American Psychological Association a meeting of heads of departments of psychology was held under the chairmanship of Dr. Hugh B. McFadden of the University of Wyoming.

Dr. Herbert Klausmeier, president, served as chairman of the business meeting. Several changes in constitution were made. It was voted on the motion of Dr. Bruce to increase the dues to \$2 a year for members and \$1 a year for student affiliates. It was also recommended on the motion of Dr. Rogers that all those who present papers must be members of the organization. On the motion of Dr. Glad it was voted that the function of treasurer be separated from that of secretary. The treasurer is to have a three-year term overlapping that of the secretary.

An invitation was extended by Dr. Ralph Norman to hold the next meeting at the University of New Mexico. The invitation was accepted and the next meeting will be scheduled for the month of April 1953 at the University of New Mexico, Albuquerque.

The following officers were unanimously elected: President, Ralph D. Norman, University of New Mexico; President-Elect, Hugh B. McFadden, University of Wyoming; Virginia M. Brown, Lowry Air Force Base, Treasurer. Lawrence S. Rogers,

Veterans Administration, Denver, continues as Secretary.

PROGRAM

Friday Morning

KARL F. MUENZINGER, Chairman

A comparison of the Rorschachs of juvenile auto thieves and juvenile burglars. STEVEN M. JACOBS and E. ELLIS GRAHAM, *University of Denver*.

The basic personality pattern of delinquents. ANNA MARTIN, *New Mexico Highlands University*.

An adaptation of the Stanford-Binet Intelligence Test, Form M, for use by a blind examiner. WALTER F. STROMER and E. ELLIS GRAHAM, *University of Denver*.

Mode flexibility as a function of rate of solution approach. CHARLES D. FINK and JACK R. GIBB, *University of Colorado*.

Two situational determiners of mechanization in problem solving. DAVID T. BENEDETTI, *University of New Mexico*.

Friday Afternoon

ALFRED B. SHAKLEE, Chairman

Substitutive and social solution fantasy: Relations between fantasy and behavior as a function of the degree of illness of schizophrenia. HAROLD DEAN BLESSING, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

Experimental use of the Emotional Projection Test and the Rorschach in the study of emotional changes. CURTIS W. PAGE, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

The validity of the Wechsler-Bellevue Intelligence Scale with Spanish speaking college students. CARLOS F. CORTES and LILLIAN G. PORTENIER, *University of Wyoming*.

Certain aspects of Wechsler-Bellevue scatter in low IQ levels. FREDERICK SCHNADT, *Veterans Administration Hospital, Fort Lyon, Colorado*.

Sociometric problems in air crews. MARIO LEVI, *Human Resources Research Laboratories, Camp Carson, Colorado*.

MMPI personality patterns for various college major groups. RALPH D. NORMAN and MIRIAM REDLO, *University of New Mexico*.

Saturday Morning

ARNO LUKER, Chairman

Changes in schizophrenic behavior in group therapy as a function of the type of therapist activity. RICHARD B. HARTLEY, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

The schizophrenic Thematic Apperception Test responses and behavior in acutely psychotic and social remission stages. HAL KEELEY, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

Characteristics of behavior in therapy as a function of types of feeling formulations. ROBERT

FERGUSON, *Colorado State Hospital*, JOSEPH ANDERSON, *Yanktown State Hospital, South Dakota*, and DONALD D. GLAD, *University of Colorado Medical School*.

Relationships between emotional projection test responses and the process of improvement in a therapy group of paranoid schizophrenics. E. FREDERICK THOMPSON, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

Identification and ego defensiveness in Thematic Apperception. RICHARD C. COOK, *Fitzsimmons Army Hospital, Denver*.

Item intercorrelations within the Szondi "factors." LEONARD V. GORDON, *University of New Mexico*.

Some semantic aspects of memory. ELWOOD MURRAY, *University of Denver*.

The relationships of attitudes and changes in attitude toward survival adequacy to the achievement of survival knowledge. E. PAUL TORRENCE, *Human Resources Research Laboratories, Camp Carson, Colorado*.

Job satisfaction of teachers as related to parental occupation level. GEORGE H. JOHNSON, *University of New Mexico*.

Religious delusions in psychosis: A comparative study. WARNER L. LOWE, *University of Denver*.

Manuscript received May 12, 1952

Tomorrow's Psychology Teachers: Film Librarians and Stage Directors?

Will audiovisual aids displace personal instruction until the *teacher* is the *auxiliary*? An emotional and economic stake in the answer to the question makes it difficult to evaluate. It is comforting to feel indispensable. But, aside from the understandable warmth with which we regard the value of our personal presence, what has science to say about the matter?

Films have produced approximately as much factual knowledge of a general science course as personal instruction (4). Two studies proved that for specified conditions television and film recordings can be as good as, or better than, traditional instruction (2, 3). In New York City a "living blackboard" will be offered "for advanced pupils confined to their homes" (5). As a side light on the assumption of the necessity for informal give and take in small sections, it should be noted that lectures to large groups of psychology students were found to be apparently as effective as small discussion groups (1). Further research is under way.

It must be conceded that the studies mentioned are primarily concerned with success in imparting information. Admittedly the ability of mechanical methods to deal properly with motivation, interest, and critical thinking has not, as yet, been evaluated. Nevertheless, a large amount of college time is and will continue to be devoted precisely to that unglamorous acquisition of factual knowledge that is literally the food for thought, no matter how much near-religious homage is paid to "ability to think." The youngest pupils and their comparative elders need parent surrogates more than information, but that need diminishes with maturity. Regardless of the qualifications and reservations that accompany the upsurge of mechanical education, it will, to say the very least, make great inroads upon the time needed for the personal presence of an instructor.

Will psychologists and other educators wait passively until some large organization embarks upon a program in which mechanization displaces a really sizable proportion of the teaching staff? With proper planning the trend could be anticipated and provided for.

At least three important needs for personal participation can *increase* with the growth of the audiovisual trend: (a) Recorded and broadcast education raises many problems of theory and technique which must be resolved by scientists. (b) Individual guidance of students is almost always understaffed and could claim far more time. (c) Many individuals who teach only to support themselves so that they can do research might,

with advantage to their institutions, themselves, and—perhaps not least—to their students, devote themselves more wholeheartedly to their scientific investigations.

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3. ROCK, R., JR., et al. *Training by television; a study in learning and retention*. Port Washington, L. I.: U. S. Navy Special Devices Center, 1951.
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ROBERT TYSON
Hunter College

A Plan for Obtaining Laboratory Equipment

All, except those associated with the most fortunate institutions, are familiar with the problems of operating with restricted budgets. It occurred to me, somewhat belatedly, after approximately twenty years of so operating, that we might do well to systematize our scavenging practices. The results of our efforts in this direction have been gratifying and, I must say, astonishing. Other laboratories might find similar procedures helpful. This latter thought prompted the transmittal of the following document, which was sent to members of the staff of the School of Education:

"Those of you who are familiar with the development of the Psychology Laboratory facilities know that the course of this development has been somewhat erratic and, at all times, slow. Funds for equipment and supplies have never been large; in some years, they have been exceedingly meagre. There have been fortunate occasions when we have been able to acquire large and handsome items, such as our very fine Hampton chronoscope, the psychogalvanometer, etc. But in all years we have augmented our technical aids by combining ingenuity and labor with assorted junk. We are quite proud of some of these assemblies. For example, we have just completed a (to date unnamed) device compounded from the following items: gears from a bombsight; motor from an unidentified naval

gadget; plywood from a packing crate; rheostat from a power-driven, moving-film recorder; pulleys, made on our lathe, from brass stock given to me by my daughter's husband's half-sister's husband (this is true); a fragment from a Wheatstone stereoscope (which already had attained the status of fragment when I came to Penn State in 1930); two bronze knobs from an ancient 35-mm. projector; machine screws previously used in a mimeograph machine we found in the unexcavated portion of the basement of the building; and, finally, steel shafting which came to me as parts of a Meccano set when I was ten years old. When we have named this machine and are confident that we understand its functions, we shall be glad to give demonstrations.

"All of the above is by way of introduction. At present, even our stock of junk is low, and it is necessary to look for new sources of supply. This, then, is a letter of solicitation and we are quite serious about it. In any home there are likely to be items of junk, useless to the household but which, under skilled hands, might be transformed into apparatus adequate for instruction and research. We are asking you to inventory your junkpile and to decide whether or not there are items you would be willing to contribute to the Psychology Laboratory. If you find such items, just send us a note and we shall gratefully and joyfully collect them, at your convenience."

WILLIAM M. LEPLEY
Pennsylvania State College

Defining Psychotherapy

The definition of psychotherapy which appears in the Boulder Conference Report and about whose origin William Hunt speculates in his article (Clinical psychology—science or superstition. *Amer. Psychologist*, 1951, 6, p. 683) arose in the following situation. The topic of "Training and Psychotherapy" (Topic XII) was assigned, at the Boulder Conference, to several groups for intensive discussion. One such group (Group II), on August 28, 1949, with Victor Raimy as chairman and myself as recorder, wrestled with defining the topic but seemed to make little progress. After summarizing our group's discussion for the Conference, I added rather timorously, as my own summary of our efforts, the following remark:

"I am afraid that in spite of our efforts we have left therapy as an undefined technique which is applied to unspecified problems with nonpredictable outcome. For this technique we recommend rigorous training."

Reactions were mixed. Some thought this was expressing an unjustified cynicism of therapy; others felt it was an apt description of the situation. Hunt's reaction to this definition ("Certainly at no time did

the Conference approach more closely to a timely and unassailable truth.") will probably be met with equally divergent reactions.

Another expression of this frustration was the formulation, by Howard F. Hunt, George F. J. Lehner, and Clarence L. Winder, of a "law" of group productivity in the following terms: $R = \frac{ka^{1-N}}{b^t}$, where R = rate of development of ideas, N = number of persons in group and where $N \geq 1$, t = time spent in discussion and where $t > 0$, and k , a , and b are constants.

That is, group productivity (R) varies inversely as the product of the size of the group and the time spent in discussion, with maximum output obtainable with optimum number of participants—one. I hasten to add, however, that this expression referred to a specific situation, and was not a reflection of the Conference—which was highly productive, as seen in the published report.

GEORGE F. J. LEHNER
University of California
Los Angeles

The Training of Psychologists in Germany

I wish to point out a misstatement in the article "On the Training of Psychologists in Germany," by Hans G. Pfaffenberger (*Amer. Psychologist*, 1952, 7, 98-99).

Four years of elementary education (Volksschule) plus eight years of higher education (Gymnasium) are no more than equivalent to our eight years of public school plus four years of high school. Four plus 8 equals 8 plus 4. It, therefore, follows that, as a matter of fact, the German doctorate in psychology, as well as the diploma, falls far short of our PhD, since it requires no training on a college level. A German student, receiving his "Abitur" at 18, should have his doctorate at the age of 22, when an American student receives his BA, or at best his MA.

W. ERNEST WEINER
Levittown, N. Y.

Two Proposals for the Advancement of Clinical Psychology

After affiliation with five different hospitals and clinics, I have crystallized my impressions in the form of two proposals which, if brought into fruition, would, I believe, contribute more to the advancement of clinical literature than anything else I have seen suggested.

The first proposal concerns the founding of an organization to be called the Society for the Advancement of Clinical Psychology. This society should have its goals set and its *raison d'être* delineated by a board of clinical psychologists and seek its membership among

all interested persons. It should set up a campaign for funds and use effective, dignified methods of accomplishing its mission—the education of the general public by radio, television, and newspaper to the scope, value, and application of clinical psychology and the manner of selection of a clinical psychologist for consultation. The campaign should be carried to schools, churches, PTA's, business and other clubs and associations. Among its objectives should be eliciting popular support for the proper licensing and employment of qualified persons. The group should sponsor research and preventive psychology by exerting pressure on schools, prisons, and other institutions to hire an adequate number and quality of psychological clinicians.

The second proposal concerns the founding of a College of Clinical and Consulting Psychology. This should have two basic responsibilities:

1. To grant the degree of Dr. Clin. Psych. to all who meet certain specific requirements. These should include a PhD or EdD from a legitimate university, a clinical dissertation, certain specific courses in psychology, a psychological autobiography, one year of full-time employment under a qualified psychologist, one year of work under the direction of a psychiatrist, and fellowship in the Division of Abnormal and Clinical Psychology by at least one member of the applicant's doctoral committee. Roughly, this would be a half-way step toward the diplomate. At present we have only extremes in our professional frame of reference. The PhD degree confuses the public. A new degree is essential for public protection. The Dr. Clin. Psych. degree, and all similarities such as Dr. Cl. Psych., should be protected by copyright so that unscrupulous persons would be prevented from confusing the public.

2. To set training standards and work eventually towards the establishment of a school of psychology, comparable to a school of dentistry or medicine, at the university level.

3. To work in very close interrelationship with the mental health fields.

4. The College of Clinical and Consulting Psychology would be a paper organization with the above-mentioned functions. On its boards would serve those who are considered to be leaders in the field of clinical psychology. It would serve to improve the profession of clinical psychology, while the Society for the Advancement of Clinical Psychology would concern itself with public relations. There would not be a duplication of

APA functions or an overlapping of division activities, for, as far as I can see, there have been no activities by either of these fine groups, beyond verbalization and catharsis.

Some criticism anticipated may point out that the proposed organizations would be an imitation of what already exists in medicine. However, imitation is commendable if it serves a constructive purpose. Others may feel that time for "exploration" is not over. The situation in clinical psychology indicates that the time for action is past due. This does not mean the end of exploration and modification, which should properly go on *ad infinitum*.

THEODORE C. KAHN
*Parks Air Force Hospital
and Clinic*

Subsidizing Publication

I understand that a policy recommendation of the Publication Board has been adopted to the effect that there should be a sharing of composition costs by the author and the Association. In view of this recommendation, I, for one, would like to go on record in opposition. In my opinion, scientific publications in our field as well as in others are still being financed as if we are in the "horse and buggy age." What I have reference to is the fact that we finance scientific journals by means of subscriptions from impecunious college instructors and college libraries and by forcing authors to pay some share. We are moving into a new era of subsidized research in which millions are being spent for research but only dollars for publication of results of research. In other words, I believe that every research grant made by institutions, foundations, business and industry, labor unions, government agencies, etc. should include a budget item for publication of the results. They should not assume that there is an obligation on the college libraries and the impecunious professors to carry the burden of publishing subsidized research. Please do not misunderstand me. I am heartily in favor of subsidized research. Our researchers, however, and sometimes those who grant money for research have overlooked an obligation to pay for disseminating the results.

DONALD G. PATERSON
University of Minnesota

Across the Secretary's Desk

FINANCES OF APA PUBLICATIONS

In many respects, the APA's primary function is that of publishing scientific journals. Each year we edit and print around 6,000 pages of material and distribute more than a half a million separate journal copies to our members and to a variety of outside subscribers. This operation involves an enormous amount of work on the part of editors and others. It also involves a great deal of money. In 1951, the Association spent a total of \$233,765.55, approximately 77 per cent of its total income, on publications activity. The following paragraphs describe for APA members some financial aspects of the large publishing business they own. This report, like many reports to stockholders, may tell some members more than they want to know about APA publication finances, but any member who worries about the prices he pays for his journals or the bills he receives for extra composition costs, or the adequacy of publication outlets in psychology, or "the money APA makes on its journals" might like to know some financial facts about the Association's publications and might, upon exposure to these facts, suddenly come down with a bright idea about ways in which APA can, for a smaller investment of time and money, pay higher dividends in scientific communication. It is safe to predict that the Board of Directors, the Council of Representatives, 10,000 psychologists, and the business manager of APA publications would all be happy to have such ideas.

INCOME AND EXPENSE FOR "AUTOMATIC" PUBLICATIONS

Each member of the Association receives automatically the *American Psychologist*, *Psychological Abstracts*, *Psychological Bulletin*, and the *Directory*. In other words, a member "subscribes" to these publications by paying his dues, and from those dues a certain proportion is allocated to the charges for each of these journals. In a sense, the APA gives these publications to each member. But they must be paid for. And they must be paid for in most part from membership dues, for income from nonmember subscriptions and sales is relatively small.

The amount allocated from each member's dues for each of these publications is determined as follows: The total cost of printing and mailing the journal is determined by simply totaling the printer's bills for the year and subtracting therefrom the amount paid into the journal by authors for early publication and "extra composition" costs. To printing costs are added the editorial and administrative costs allocated to that particular publication. This total publication cost is then divided by the number of subscribers to the journal. This per-volume cost is then taken from each member's dues and allocated to the particular publication. In 1951 this procedure resulted in the following allocations from dues:

<i>American Psychologist</i>	\$2.36
<i>Psychological Abstracts</i>	3.04
<i>Psychological Bulletin</i>	1.35
<i>Directory</i>	2.87
Total	\$9.61

Each year the Association buys a number of extra copies of each issue of each journal to keep on hand to fill future orders. The cost of these extra copies is a real annual expense and, if added to the above figures for each member, gives the amount the Association actually paid per member in 1951 for the three "automatic" journals and the *Directory*.

<i>American Psychologist</i>	\$2.99
<i>Psychological Abstracts</i>	3.98
<i>Psychological Bulletin</i>	1.81
<i>Directory</i>	3.10
Total	\$11.88

The prices to outside subscribers are as follows:

<i>American Psychologist</i>	\$7.00
<i>Psychological Abstracts</i>	7.00
<i>Psychological Bulletin</i>	7.00
<i>Directory</i>	5.00
Total	\$26.00

According to this figuring, each Associate received in 1951 for his \$11.50 dues (Associates pay \$12.50, one dollar of which in most cases goes to a division) a group of publications for which APA paid \$11.88. The Association gains back-issue assets out of this

transaction, but in terms of cash APA got nothing from its Associates with which to run nonpublication operations. From each of our Fellows, the Association received \$4.62 for nonpublication activities. From members of the Student Journal Group, who for \$7.50 received the *American Psychologist*, *Psychological Abstracts*, and the *Directory*, we received little more than enough to pay the minimal cost of printing the publications. As most members will regard as proper, students contribute little or nothing for the editing or managing of the publications and nothing at all for the nonpublication functions of the Association.

For 1951 the three member journals had a "paper" net income of approximately \$5,300. There was a gross income of about \$19,000 from libraries, about \$4,700 from back issues, about \$9,000 from advertising. If any one of these sources of income were appreciably diminished, the three journals would either show a loss or would absorb a prohibitively larger proportion of dues income. It is clear that if our members were the only subscribers to these journals, we would be in trouble. We might say that now we are being supported by libraries who subscribe to our journals and/or purchase back issues.

INCOME AND COSTS FOR OTHER PUBLICATIONS

Unlike the three "automatic" journals and the *Directory*, all other APA publications are financed by (a) voluntary subscriptions from APA members, (b) subscriptions from libraries and other non-APA people, and (c) sale of single copies and back issues. The costs of producing each of these "voluntary" journals along with subscriptions prices to (a) members and (b) outside subscribers are presented in Table 1.

TABLE 1

Cost of "volunteer" journals and 1951 subscription prices

Journal	Cost of Producing 1951 Volume	1951 Price to APA Members	Price to Outside Subscribers
<i>Abnormal and Social</i>	3.83	3.00	6.00
<i>Applied</i>	3.28	3.00	6.00
<i>Comparative</i>	6.04	3.00	7.00
<i>Consulting</i>	3.46	3.00	5.00
<i>Review</i>	3.41	3.00	5.50
<i>Experimental</i>	8.54	6.00	14.00
<i>Monographs</i>	5.47	3.00	6.00

It is clear that in the case of none of these journals is the APA subscriber paying what it costs—according to our present accounting system—to produce the publication he receives. The subscribers to Club A, of course, get the journals at a still lower price (approximately \$2.50 per volume). Outside subscribers pay us some "profit" in every case, varying from \$.53 per volume on *Monographs* to \$5.46 per volume for *Experimental*. In terms of total income from subscriptions, we received in 1951 for these seven "voluntary" journals approximately \$42,000 from outside subscribers and approximately an equal amount from APA subscribers. This means that we have approximately twice as many APA subscribers as we have outside subscribers to these seven journals. We lost money on APA subscribers but made it up on outside subscribers. Of these outside subscribers, the largest proportion are

TABLE 2

Costs of "volunteer" journals and 1953 subscription prices

Journal	1951 Cost per Volume	1953 Price to APA Members	1953 Price to Outside Subscribers
<i>Abnormal and Social</i>	3.83	3.50	7.00
<i>Applied</i>	3.28	3.50	7.00
<i>Comparative</i>	6.04	3.50	8.00
<i>Consulting</i>	3.46	3.50	7.00
<i>Review</i>	3.41	3.50	6.50
<i>Experimental</i>	8.54	6.50	15.00
<i>Monographs</i>	5.47	3.50	7.00

libraries. Again it looks as if the libraries are financing our journals for our members.

The Council of Representatives voted in September 1951 to increase prices of our journals to outside subscribers and proportionately to raise prices to our own members. (Postal regulations require that we charge our members at least half of what we charge outsiders.) Table 2 presents the financial picture as it will look in 1953—provided publication costs stay the same.

If publication costs remain the same, which is doubtful, our situation in 1953 will appear sounder, but even if costs do stay the same it is obvious that we will need a number of outside subscribers and a good sale of back issues if we are to keep our journals self-supporting. The fact that publication costs continue to increase and the fact that not many additional libraries can be expected to stock up on our back issues should give us con-

siderable pause in spite of our 1953 increase in subscription rates. Our members will still be getting our journals at considerably less than what we here have termed cost. The picture for the *American Psychologist*, *Abstracts*, and the *Bulletin* is different, but still potentially alarming. These three journals will not show a loss because the basic costs are charged to dues income. But dues income is finite and the Association will still need money to operate its nonpublication activities.

With respect to these seven volunteer journals, we have to realize that "cost" can be determined in a variety of ways. The cost figures used above are based on the procedure of dividing the total cost of producing a volume by the number of volumes distributed. This is the cost of the "average" volume of any journal. We can take another view of costs that makes it appear we are making a "profit" from each of our members when we sell them a journal at a loss. We can say that we do not sell our members "average" volumes; we sell them volumes from the supply left over after we have supplied our outside subscribers. The first 1,000 copies of a journal are the expensive ones. These *must* be printed. After the first thousand, additional thousands are cheap. We can sell these additional thousands at very low prices and still net an income on each. This way of figuring has sufficient reality to mean that additional member subscribers—even though we theoretically lose money on each one—will improve the financial state of our journals.

The seven volunteer journals had a total 1951 income from all sources, other than the sale of back issues, of \$133,411.06. The total cost of operating these journals was \$137,310.70. In terms of annual self-support, then, these journals ran a deficit of \$3,899.64. This deficit was more than made up by the \$11,191.64 income from the sale of back issues, but the fact that these seven journals bear only 51 per cent of the editorial and administrative costs of running our publications while the three volunteer journals bear 49 per cent (vide infra) leaves room for doubt that these seven journals are truly self-supporting. Whether or not any of our publications pays its own way will depend not only on figures pertaining to hard cash but also on the sort of assumptions we adopt to guide our accounting procedures. These assumptions are stated and examined below.

METHOD OF ALLOCATING EXPENSES

In calculating the cost of publishing our journals we use a system involving (a) direct charges and (b) allocated charges. The principal direct charge is the printer's bill—including costs of paper, printing, binding, wrapping, and mailing. The allocated charges are those for the general central office expense. Table 3 below gives the percentages of central office expense items that are charged off to publications.

This system of allocation yields a total administrative and editorial expense for all APA publications. This total is then allocated among the various publications according to a formula that makes the charges to each journal proportional to the circulation of the journal times the number of issues per year of that journal. For each journal, the number of issues per year (x) is multiplied by the number of copies printed (y) to give a "publication units" figure (xy) for each journal. For 1951, the Association produced a total of about 550,000 publication units—550,000 separate copies of separate issues of journals. To this annual total, a certain percentage is contributed by each journal. In 1951, for example, the *American Psychologist*, with 12 issues and a print order of 11,800, had 141,600 "publication units" or approximately 25 per cent of the Association's total. The *Journal of Abnormal and Social Psychology*, with only four issues and a print order of 5,600, had a total of only 22,400 "publication units," or 4 per cent of the total. When this "publication unit" percentage is calculated for each journal, the percentages are then operated upon by a formula ($N/2 + .05$) designed to pull in the extremes of the distribution curve. The formula reduces the large figures and increases the smaller ones, drawing both closer to the mean.

TABLE 3

Allocation of general expenses to publications

Compensation to central office general employees	50%
Managing Editor	75%
Editorial Assistants	100%
Furniture and Equipment	50%
General Office Supplies	25%
Postage and Express	25%
Telephone and Telegraph	25%
Rent	50%
Council of Editors	100%

In 1951, the terminal results of this operation gave 18 per cent of the allocated expenses to the *American Psychologist*, 7 per cent to *Abnormal and Social*, 20 per cent to *Abstracts*, etc.

The general assumption lying behind this procedure is that the administrative burden represented by a journal increases with the number of issues and with the size of circulation. Also the procedure may have in it the sort of philosophy upon which income tax laws are based—the rate of payment is adjusted according to the ability to pay. Other assumptions and another philosophy will yield a somewhat different picture of the net income of the various journals. Both the Publications Board and the Finance Committee have examined the present and other possible methods of allocating costs among the journals but neither body seems to find the problem particularly nutritious. The general attitude seems to be that as long as publication finances in general are sound and as long as each journal serves a useful function nobody should bother himself much about which journal shows a "profit" and which a "loss." A thick journal with a thin circulation will lose money. A thin journal with a thick circulation will break even. The APA has only relatively thick journals. Circulation varies greatly from journal to journal. As long as all the journals are in the same family, and the family mutually self-supporting, everything is fine. The problem of allocating costs among journals may be a technical matter, better left to those who, through detailed financial analysis, might find ways to save the Association a few dollars.

REPRINTS AND EXTRA COMPOSITION COSTS

For several years it has been the policy of the Association to give 50 free reprints to the authors of each regular article in our journals with the author being billed for the cost of any reprints in excess of 50. In 1950 and 1951, this service to authors cost the Association between \$2,000 and \$3,000 a year. Last September, the Council, upon the recommendation of the Board of Directors, voted to cease this practice and, for articles received after January 1, 1952, to require the author to pay for whatever quantity of reprints he desired. This change, if it is to stand, will save the Association perhaps \$700 in 1952 (a large number of manuscripts published in 1952 were received before January 1, 1952), and \$2,000 to \$3,000 in 1953. However, the Publications Board is recommending that

this 1951 action be repealed and other arrangements made to handle both reprints and charges, now passed on to authors, for extra composition costs.

It is the procedure now to charge authors for (a) the total cost of changes he himself makes in proof and (b) one-half the cost of tabular material, cuts, and other composition of a special, and hence expensive, sort. In 1951, authors paid on an average about \$2.00 per page for their changes in proof and for "extra" composition costs. This means that the Association paid around \$4.00 per page for these "extras" and collected around \$2.00 per page from authors. In 1951, the Association paid out, then, approximately \$20,000 to printers, over and above the "regular" printing bills, and collected approximately \$10,000 from authors for these extra costs.

The cost to individual authors varies decidedly, the variation depending primarily on the number of tables and cuts he includes. Authors who write articles without tabular material pay very little.

The Publications Board is making the recommendation that (a) we restore the practice of supplying 50 reprints and (b) authors not be charged according to the amount of tabular or special material included but be charged a flat per page rate for publishing in one of our journals. The financial implications of this arrangement are approximately as follows: 50 free reprints to each author would cost the Association, as in the past, around \$3,000 per year. Special and extra composition would continue to cost around \$20,000 per year. If authors pay a flat rate of \$2.00 per page, the cost to the Association for free reprints and special composition, would be around \$13,000. This is essentially what the cost was in 1951. If authors paid a flat \$3.00 per page, the Association would save about \$5,000 of this \$13,000.

EARLY PUBLICATION

Any author who wishes to pay the full cost of printing an article properly accepted for publication can have his article immediately published in an APA journal. It has been the practice to charge the author of such an article the full cost of all printing—regular and special—and to have him pay the full cost of all reprints he orders. Table 4 presents figures on (a) the per page cost to print the various journals, (b) the per page cost when administrative and editorial costs are added to the cost of printing, and (c) the 1951 charges to authors for early publication.

TABLE 4

1951 print costs, publication costs, and charges for early publication

Journal	Per Page Cost of Printing	Per Page Cost of Publication	Per Page Charges for Early Publication
<i>Amer. Psychol.</i>	\$33.56	\$48.47	\$28.00
<i>Abnormal</i>	21.61	29.57	17.00
<i>Applied</i>	18.13	27.47	15.00
<i>Comparative</i>	12.75	19.39	11.00
<i>Consulting</i>	17.14	24.88	14.00
<i>Experimental</i>	15.10	21.43	14.00
<i>Abstracts</i>	35.20	49.25	No prior pub.
<i>Bulletin</i>	21.13	31.05	17.00
<i>Monographs</i>	18.93	24.99	15.00
<i>Review</i>	13.74	24.43	14.00

The author actually pays more for early publication than indicated in the per page rates in Table 4 since he also bears the full cost of alterations, special composition, and reprints. These charges will add, on the average, about \$4.00 per page to what the author pays. The figures for print costs in Table 4 include what the APA pays the printer for special composition, so, in actuality, authors finally pay approximately what it costs to print their articles. They do not pay anything toward the editorial or administrative costs of the journal in which the article appears. In one way, then, APA subsidizes the authors of articles that appear early. In another way, since early publication articles are thrown as extras into a system already in operation, a few additional pages can be added to a journal without making a noticeable difference in editorial or administrative burden or cost. Any appreciable increase in early publication, however, would soon cause increased editorial and overhead costs and would soon lead to the idea that authors of early publication papers might well bear some of the editorial and administrative costs of getting the article on the desks of readers.

SUMMARY OF PUBLICATIONS FINANCES FOR 1951

Our books show a net income of \$12,846 for all our publications in 1951. Our publications are in the black. But there are red tinges to this black. If we eliminate income from the sale of back issues (\$16,052.09) the net figure becomes a deficit. We are leaning heavily on the back-issue source of income, a source that seems bound to run relatively dry relatively soon. Our members are getting three

volunteer journals below cost. The three "automatic" journals operate well in the black, but allocation of expenses to dues income, a procedure insuring that these publications will keep their financial heads up, eats heavily into the source of income for general APA functions.

If it appears that some worry about publication finances is in order, there are certain obvious courses of action—none of which anybody wishes to take—that will keep our publication business on a sound financial footing.

1. *Reduce printing costs.* The simplest way to do this is to reduce the number of pages published. Editors want more pages because as the number of psychologists increases there is more demand and need for increased, rather than decreased, publication outlets.

2. *Increase the number of outside subscribers.* We might conduct a concerted campaign to have more libraries and more individuals subscribe to our journals. Such a campaign will itself cost money, but it might pay off if there are many libraries still without our journals. The Central Office has tried a few ventures into salesmanship, without startling results.

3. *Increase the number of APA subscribers.* Although our membership has grown tremendously in the past five years, the number of voluntary member subscriptions to journals has increased very little. There has been a gradual decline in the percentage of our membership subscribing to the volunteer journals. There may be ways to increase this percentage. Every subscriber, from any source, we can add to our present lists will net us a profit unless we set give-away prices.

4. *Increase prices.* This has already been done for 1953. The chances seem good, however, that increased printing and editing costs will eat up the increased income. Also everybody connected with APA publications is a little inclined to spend the 1953 increased income—on extra pages and extra services—before we receive it.

5. *Increase advertising.* This is possible but there are definite limits. Psychologists use few tools in their business—mainly books, tests, and imagination. The latter is difficult to advertise and we cannot expect to increase very materially our book and test advertising. The old question of cigarette and whiskey advertising raises its ugly head.

6. *Reduce administrative costs.* It now costs about \$31,000 a year to administer our journals.

This might be reduced, but such a reduction will be difficult, as the previous pages have shown.

7. *Reduce editorial costs.*¹ The editorial costs, including salaries for the *Abstracts* office, for the Central Office editorial staff, and for one-quarter of a person to manage the *American Psychologist* came to about \$20,000 in 1951. It will not be any lower in 1952 and 1953 if the same services are required. We can eliminate the central editorial office but the editors seem to find the service very useful and perhaps necessary.

8. *Raise dues.* Increased dues can help the publications. The line between publication function and nonpublication function is an indistinct one. As long as the Association operates in the black, nobody cares much where the money comes from. As long as we publish good journals, run good conventions, and have good committees, nobody cares much where the money goes.

9. *Decrease nonpublication activity so that dues income can go into publications.* This is possible, but in this complex time of our lives as a science and profession the APA is under constant pressure to do more rather than less.

¹ It might be interesting to compute the cost of APA journals if (a) we had to pay our editors for their services, (b) we paid for all secretarial assistance editors use, and (c) if we paid for the space our editors occupy when they are working for APA. It probably takes about one-third of a psychologist's production time to edit a journal. With nine editors, this gives to APA the equivalent of three full-time men. Our editors are worth \$10,000 or more per year. We have an annual figure of \$30,000, then, for editorial services. Three full-time editors would use three full-time secretaries. That's another \$8,000. Office space, in Washington at least, costs \$3.00 or more per square foot per year. Let's give an editor and his secretary 100 square feet apiece. That's \$2,700 a year. Thus the readers of and contributors to our journals are annually given at least \$40,700 worth of time and space. If this were paid for, our journals would cost about 17 per cent more and we would be deep in the red. *Somebody* pays for our editorial services.

10. *Find ways to subsidize publication.* Millions of dollars per year go into sponsored psychological research. Little goes into the support of publication. Sponsors of research, in a way, are getting publication at the expense of libraries and individual members of APA. It would seem desirable and equitable to find ways for sponsors of research also to sponsor publication.

11. *Start new journals.* The number of psychologists is increasing rapidly. The number of manuscripts submitted for publication is also increasing. There is continual pressure to increase the size of our journals. We cannot add pages without increasing costs. One solution would be to start new journals to take care of the increased flow of manuscripts. Self-supporting new journals would be a possible solution.

12. *Invent new procedures for achieving scientific communication.* For a very long time there has been no change in the form and media of scientific communication. Its amount has increased enormously but we go about the process much as grandfather or Wundt did. It is very troublesome and very expensive to print articles on paper and mail large numbers of bulking journals—probably containing many articles read by only a small number of experts and specialists. What about micro-cards and every APA member with a viewer? What about some other procedure that would meet our needs at a lower cost and with greater efficiency? To break with tradition is painful, but perhaps we should consider ways of streamlining our publications.

13. *Do nothing.* We are not in desperate financial straits. We have a reserve fund, built up principally from the sale of back issues. With the new building, this reserve will no longer be liquid, but we can operate at a deficit for a few years and still survive. The Finance Committee will worry hard, however, about such a course of action.

FILLMORE H. SANFORD

Psychological Notes and News

Schachne Isaacs died August 12, 1952, at the age of 63. He was a clinical psychologist in the audiology section at the Walter Reed Army Medical Center, specializing in psychological problems of persons with hearing defects.

Gardner Murphy, chairman of the department of psychology at the City College of New York, was appointed director of research at the Menninger Foundation, as of September 1, 1952. He is succeeded at City College by John Gray Peatman. Also on September 1, Lois Barclay Murphy began an appointment as senior psychologist in the department of social applications of psychiatry at the Menninger Foundation.

Evelyn Carrington was elected president of the International Council of Women Psychologists and assumed office at the annual meeting in September.

On February 1, 1952, Warren C. Middleton left his position as professor of psychology at DePauw University, where he had taught for twenty-five years, to accept an appointment as staff associate in the Washington office of the American Association of University Professors.

William C. Westberg, formerly of North Carolina State College, Raleigh, North Carolina, has been appointed professor in industrial psychology, and Forrest B. Tyler, of Ohio State University, has been appointed assistant professor in clinical psychology at Southern Illinois University, Carbondale, Illinois. Dr. Westberg and Dr. Tyler joined the staff at Southern Illinois in September, 1952. Leslie F. Malpass of Syracuse, New York, joined the staff in March, 1952. These three additions, with the appointment of Noble H. Kelley as chairman in September, 1951, form the nucleus of a new all-university department of psychology at Southern Illinois University.

William C. Kvaraceus, professor of education in Boston University, has been granted a sabbatical leave to serve as adviser to the Turkish Ministry of Education on problems in the education and training of exceptional children. He will also give courses at Gazi Teachers College in Ankara.

Joseph M. Sacks has completed his tour of military duty at Madigan Army Hospital and has returned to his position as psychotherapy supervisor at the Franklin D. Roosevelt Veterans Administration Hospital, Montrose, New York.

William D. Glenn retired from his position at New York University after 25 years of service. Since 1927 he has been associate professor in the department of psychology, and he has also served as director of psychological services since 1945 and director of the Reading Institute since 1950.

H. A. Witkin has been appointed director of the laboratory for research in psychodynamics and associate professor in the department of psychiatry of the State University of New York College of Medicine at New York City.

Arthur H. Davison has joined the clinical psychology staff at the Veterans Administration Hospital, Perry Point, Maryland.

J. Warren Thiesen is now chief clinical psychologist at the Boston VA Mental Hygiene Unit. He was formerly with the Providence VA Mental Hygiene Unit.

E. Victor Mech was appointed research psychologist in the Institute of Educational Research, and instructor in educational psychology, in the School of Education at Indiana University, Bloomington, Indiana, as of May 1, 1952.

Robert G. Kaplan has been released from the Army and has entered private practice in San Diego, California.

W. A. Reynolds has left his position at Barton, Batten, Durstine and Osborn to go to McCann-Ericksen Advertising Agency to be in charge of overseas research.

Leo Goldman, at present assistant professor of education at the University of Buffalo, has been relieved of half his duties in the School of Education, effective June 1, in order to assume half-time duties as acting director of the vocational counseling center of the University.

Carleton F. Scofield, chairman of the department of psychology at the University of Buffalo, has been granted leave of absence to assume the assistant directorship for psychological warfare of the Human Resources Research Office in Washington, D. C.

William B. Michael, formerly on leave of absence from San Jose State College as research associate in psychology in the social science division of the RAND Corporation, Santa Monica, California, has been appointed director of the test bureau and associate professor of psychology and education at the University of Southern California, effective September 1.

John M. Stalnaker, director of studies for the Association of American Medical Colleges, will act as a consultant during 1952-53, on a part-time basis, to the Fund for the Advancement of Education. He will be concerned with the field of scholarships. The Fund, of which Clarence Faust is president and Alvin C. Eurich, vice-president, was established by the Ford Foundation.

Henry L. Sisk has resigned from his position of director of industrial relations and personnel at Milprint, Inc., Milwaukee, Wisconsin to accept the position of director of organizational development, Central Region Continental Can Company, Inc., Chicago, Illinois.

The Wichita Guidance Center has appointed the following to internships beginning September 15th: Albert Bandura, Iowa University, Donald Spence, Teachers College, Columbia University, Glen Roberts, University of Kentucky, and H. E. Wheeler, Washington University, St. Louis. Aileen Clawson has been appointed to the position of junior psychologist.

The Marshall College Psychology Department conducted a series of six television programs last spring on the topic "This is Psychology." Kenneth Loemker, Madeleine Feil, and Donald Perry were among those who participated in the program.

The 1952 Kentucky General Assembly recently passed a **Kentucky Professional Titles Act**, which is of interest to professional psychologists. Section 1 of the Act states:

"Section 1. (1) No person shall, in connection with the practice of medicine, surgery, osteopathy, optometry, dentistry, chiropody, pharmacy, chiro-

practic, psychology or psychiatry, nursing, anesthesiology, physio or physical therapy, or any other profession or business having for its purpose the diagnosis, treatment, correction or cure of any human ailment, condition, disease, injury or infirmity, hold himself out as a Doctor or employ or use in any manner the title 'Doctor' or 'Dr.,' unless he actually has graduated and holds a doctor degree from a school, college, university or institution authorized by its governing body to confer such degree."

"(2) No person who holds a doctor degree, as provided in subsection (1) of this section, shall use or employ the title 'Doctor' or 'Dr.' in or upon any letter, statement, card, prescription, sign, listing or other writing, without affixing suitable words or letters designating the particular doctor degree held by such person."

A three-day workshop in the use of the Rorschach technique is being held on September 19, 20, and 21, 1952 at the psychology department, Crownsville State Hospital. This workshop will be conducted by Florence Halpern who will present records of schizophrenic's, depressive's and organic's cases and children. The fee is \$10.00. For information write to Vernon W. Sparks, Acting Chief Psychologist, Crownsville State Hospital, Crownsville, Maryland.

The next meeting of the Committee for the Scientific Study of Religion has been planned for December 26-27 in New York. Social scientists who would like to present papers should send abstracts of not more than 300 words to Professor Talcott Parsons, Department of Social Relations, Harvard University, Cambridge 38, Massachusetts.

The Society for Clinical and Experimental Hypnosis will hold its annual scientific meeting on September 27, 1952, at the New York Academy of Sciences, 2 East 63rd St., New York City. This will be an all-day meeting, and all who are interested in the scientific aspects of hypnosis are invited to attend.

The Tenth Annual Reading Institute at Temple University will be held during the week of February 2-6, 1953. The theme will be the "Curriculum Approach to Reading Instruction." Its purpose will be to point up the need for an integrated program of reading in every phase of the child's school curriculum. The activities will in-

clude lectures and discussions, demonstrations, laboratory practice, evaluation of reading programs, seminars, staff meetings, and conferences with staff members. Advance registration is required. For a copy of the program and other information regarding the Institute write to Emmett Albert Betts, Director, The Reading Clinic, Temple University, Broad and Montgomery Avenue, Philadelphia 22, Pennsylvania.

Ten graduate students majoring in clinical psychology have been selected to continue their education under the Senior Psychology Student Program sponsored by the Army Medical Service. They are Alvin O. Bellak, Pennsylvania State College; Murray Cook, New York University; William E. Dattel, University of California, Los Angeles; Aaron G. Parker, University of California, Los Angeles; Richard Sandison, Harvard University; Jack H. Scott, University of Illinois; John R. Smith, University of California, Los Angeles; Robert M. Brown, Princeton University; Sidney R. Hyman, University of Pittsburgh; and Richard W. Roberts, University of California, Los Angeles.

To qualify for participation in the program, a student must need no more than two years to complete requirements for his PhD degree in clinical psychology. Selectees continue their studies while they receive the full pay allowances of second lieutenants in the Medical Service Corps Reserve. Upon completion of their academic work, graduates must apply for a Regular Army commission in the Medical Service Corps, and if appointed, must agree to serve at least three-years' active duty. Qualified applicants are appointed first lieutenants when they enter the Regular Army.

Since the inauguration of the Senior Psychology Student Program in 1949, fourteen graduate students have completed their studies in this program and subsequently received commissions in the Regular Army, serving as clinical psychologists and research psychologists. Applications of graduate students and inquiries concerning the program should be addressed to The Surgeon General, Department of the Army, Main Navy Building, Washington 25, D. C., attention: Chief, Personnel Division.

The Educational Testing Service is offering for 1953-54 its sixth series of research fellowships in psychometrics leading to the PhD degree at Princeton University. Open to men who are acceptable to the Graduate School of the University,

the two fellowships each carry a stipend of \$2,500 a year and are normally renewable. Fellows will be engaged in part-time research in the general area of psychological measurement at the offices of the Educational Testing Service and will, in addition, carry a normal program of studies in the Graduate School. Competence in mathematics and psychology is a prerequisite for obtaining these fellowships. The closing date for completing applications is January 16, 1953. Information and application blanks will be available about November 1 and may be obtained from: Director of Psychometric Fellowship Program, Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

Three fellowships given by the Educational Testing Service for the present year have been awarded to Bertram P. Karon, a graduate of Harvard University; Robert Sadacca, a graduate student at Columbia University; and Edward G. Nolan, a graduate student at the University of Edinburgh, Scotland. H. Paul Kelley, Samuel J. Messick, and Richard E. Wortman have been reappointed as ETS Psychometric Fellows.

The Second Graduate Fellowship Program of the National Science Foundation, providing awards for study during the 1953-54 academic year in the mathematical, physical, medical, biological and engineering sciences, will get under way early in October.

The majority of awards will be made to graduate students seeking master's or doctor's degrees in science, although a limited number of awards will be made to postdoctoral graduates. NSF graduate Fellows are selected solely on the basis of ability. Candidates will be judged on their scientific aptitude and achievement as reflected in academic records and recommendations from individuals who are familiar with their scientific aptitudes. Pre-doctoral applicants will take an examination designed to measure scientific promise and level of advancement.

NSF graduate Fellows may attend any accredited nonprofit institutions of higher education in the United States or similar institutions abroad. Stipends vary with the academic status of the Fellows. First year Fellows—students entering graduate school for the first time or those who have had less than one year of graduate study—will receive a stipend of \$1,400. Fellows who need one final academic year of training for the doctor's degree receive a stipend of \$1,800. Fellows between these

groups will receive a stipend of \$1,600. The basic stipend for postdoctoral Fellows will be \$3,400 per year. Dependency allowances will be made to all married Fellows. Tuition and laboratory fees and limited travel allowances will also be provided.

Application forms for both predoctoral and postdoctoral graduate fellowships for the 1953-54 academic year may be obtained after October 1, 1952, from the National Science Foundation, Washington 25, D. C. Completed applications must be returned to the Fellowship Office, National Research Council, by January 5, 1953. The special examination for predoctoral candidates will be given at various places throughout the United States on January 31, 1953.

The Association Internationale de Psychotechnique is now publishing a Bulletin at six-month intervals, containing news items of interest to specialists in applied psychology. Members of the Association are asked to send in material on activities of psychologists in their countries. Correspondence should be addressed to the General Secretary of the Association Internationale de Psychotechnique, 41, Rue Gay-Lussac, Paris (5*), France.

The Bell Telephone Laboratories, some four years ago, initiated a program of basic research on broad problems concerning the relation between future communication systems and the preferences of human beings. This program is now on a modestly flourishing basis. The research team includes personnel from the fields of physics, engineering, statistics, and psychology. Ralph K. Potter, Walter A. Shewhart, and John E. Karlin were among those responsible for planning the program, and the last named is now directing it.

The Counseling Center of the University of Chicago announces the publication of the first three reports to grow out of its comprehensive research project in psychotherapy. The reports are contained in a double issue (165 pages) of the *Psychological Service Center Journal* (1275 New Hampshire Avenue N. W., Washington 6, D. C.) which has recently come off the press. The research is concerned with the processes and outcomes of psychotherapy, and is financed by a grant from the Rockefeller Foundation.

These first three papers cover the over-all planning and development of the research program; the

research design and procedures for the cases in Block I; and a complete presentation of all the research data on one of the cases from Block I, illustrating the complex methodology being used. Participating in the authorship of these articles are the following members of the staff of the Counseling Center and the department of psychology of the University of Chicago: Thomas Gordon, Donald L. Grummon, Carl R. Rogers, Julius Seeman.

Other articles will be published in the near future, for the most part in the *Psychological Service Center Journal*, giving further reports of the results of this research.

A research project on the development and validation of selection techniques for the National Science Foundation predoctoral and postdoctoral fellowship programs has recently been initiated by the National Science Foundation to be carried out by the Office of Scientific Personnel of the National Research Council, Washington, D. C., M. H. Trytten, Director. Calvin W. Taylor has been granted a year's leave of absence from the University of Utah to direct the research program. An advisory committee on selection techniques consisting of W. J. Brogden (chairman), David C. McClelland, Frederick Mosteller, John M. Stalnaker, and Robert L. Thorndike, has been organized to guide the research activity. Dael L. Wolfe is serving as a consultant to the project.

The Publication Manual of the American Psychological Association was published as a Supplement to the July *Psychological Bulletin*. It has also been mailed to all members of the Student Journal Group. Additional copies may be obtained from the APA office at a price of \$1.00 per copy.

The Psychological Notes and News section of the *American Psychologist* is planning to begin the publication of items announcing current research projects or research-in-progress in psychology. These items will include projects sponsored by government agencies, foundations, universities, institutes, and other institutions, and major research programs developed by individuals. Psychologists engaged in such projects are invited to submit information about them, including the name of the project, a brief description of the research being conducted or planned, the names of those primarily responsible for carrying out the work, and any other relevant facts.

Convention Calendar

AMERICAN PSYCHOLOGICAL ASSOCIATION

September 4-9, 1953; Michigan State College

For information write to:

Dr. Fillmore H. Sanford
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IMPROVING UNDERGRADUATE INSTRUCTION IN PSYCHOLOGY

Report of a study group supported by the Carnegie Corporation of New York and the Grant Foundation which met at Cornell University, June 21-August 16, 1951

The student is not always at fault. Teaching, too, often requires an occasional review of what has been taught. Such was the objective of this study by six eminent American Psychologists who spent the summer of 1951 at Cornell University working together because they believed that they could develop a better undergraduate curriculum in psychology than is now being taught. The following important topics were studied, discussed, and incorporated in this book: Objectives of Undergraduate Instruction in Psychology, The Recommended Curriculum, Personal Adjustment Courses, Technical Training in Psychology, Problems in the Implementation of the Curriculum, Research Problems Underlying the Curriculum in Psychology.

Ready in September

CONTRIBUTORS

Claude E. Buxton, *Yale University*, Charles N. Cofer, *University of Maryland*, John W. Gustad, *Vanderbilt University*, Robert B. Macleod, *Cornell University*, Wilbert J. McKeachie, *University of Michigan*, Dael Wolfle, Chairman, *Commission on Human Resources and Advanced Training*.

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ANNUAL REPORT OF THE POLICY AND PLANNING BOARD OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION: 1952

IN fulfillment of the forecast in its last report, the Policy and Planning Board in 1951-52 made a special effort to organize a comprehensive study of the profession of psychology as science, as education, and as practice. The task of formulating such a program and of deciding upon a suitable strategy for conducting it has been the principal concern of the Board during the past year. The question of the responsibility of the American Psychological Association for the advancement of psychology as a science was also reviewed at the annual meeting in May. This report is mainly an account of the Board's consideration of these two problems.

Three meetings were held in 1951-52, including the single session at the Annual Convention in September 1951. It was agreed at the September meeting that the main business of the Board in 1951-52 would be the systematic study of psychology as a profession. A steering committee was appointed to prepare a draft of a proposal to be submitted to foundations for financial support. This committee met in New York on October 5-6, 1951, with the following members in attendance: Wayne Dennis, John W. Gardner, Lyle H. Lanier, and Harold Seashore (chairman). A full meeting of the Policy and Planning Board was held on October 25-26, to discuss the proposal and to approve plans for the study. Finally, the regular annual meeting of the Board was held at Vassar College, Poughkeepsie, New York on May 15-17, 1952. All members of the Board were present. Stuart W. Cook, M. Brewster Smith, and John T. Wilson also attended certain sessions of the annual meeting.

Only a single issue was referred to the Policy and Planning Board by the Council of Representatives in 1951-52. This was a proposal from the Division of General Psychology that all Associate members of the APA not members of other divisions be automatically classified as members of the Division of General Psychology. The Board voted to disapprove this proposal.

At the annual meeting in May, Frank A. Beach was elected chairman of the Policy and Planning Board for 1952-53.

THE EFFORT TO ORGANIZE A STUDY OF PSYCHOLOGY AS A PROFESSION

The decision to sponsor this study was not made without considerable debate concerning both its

feasibility and its utility. All of the Board's discussions of the problem pointed up the difficulties involved in carrying out a comprehensive investigation of psychology that would be satisfactory as social science and useful to the American Psychological Association. Both the complexity of the problem and the imperfect state of methodology and theory in the relevant social sciences were considered to be grave difficulties.

While recognizing these difficulties, the Board at its meeting in October 1951 decided that a study of the structure and functions of the profession of psychology as a social institution would yield many kinds of valuable information to psychologists and to the Association. In addition, it was believed that the proposed investigation would be of considerable methodological value as a pilot study of the professions in modern society, undertaken in the light of the systematic analysis of the professions by contemporary sociologists.

It became obvious at the meeting of the Board in October 1951, however, that a definitive study of all aspects of psychology as a profession, including its relationships to other professions, should probably not be attempted in an initial study. There were many reasons: (a) the cost would be prohibitive; (b) there was doubt that personnel for such a program could be recruited; (c) even if money and staff were available, the imperfect state of methodology and knowledge concerning these problems made it seem unwise to attack all of them at once. The Board therefore decided upon an exploratory study and agreed upon a proposal to be submitted to the Russell Sage Foundation and the Carnegie Corporation for joint support. Even this exploratory study was further subdivided into two phases: (a) a planning stage of some six to nine months, to be devoted almost entirely to the definition of problems and development of procedures; (b) a succeeding year of intensive study of those aspects of the problems judged to be of greatest importance to psychology and to the Association. The proposal was submitted to the two foundations on October 30, 1951. Three main classes of problems were described under the following headings:

(a) the demand, utilization, and supply of psychologists; (b) the recruitment and training of personnel in psychology; (c) the institutional structure and role of psychology as a profession. After discussion with officials of the Russell Sage Foundation and the Carnegie Corporation, agreement was reached for the joint support of the planning stage of the study, in an amount up to \$15,000. It was decided that the funds needed for the later stage of the investigation could be better estimated after the planning phase had been completed.

The grant was approved late in November 1951. This meant that a suitable project director could hardly have been secured before the beginning of the second semester. With this expectation, the Board hoped that the planning study might be completed by September 1952. But this hope turned out to be illusory. None of the psychologists approached as possible directors of the project could be secured before June 1952.

Meantime, in January the Board learned of the possible interest of the National Science Foundation in sponsoring a study of psychology as a science. A contract for a similar study had been negotiated with the American Physiological Society and it seemed likely that support on a substantial scale could be secured for a study of psychology. The National Science Foundation needed information concerning the status of methodology, theory, and empirical knowledge in psychology and in other sciences. It was also interested in the social and institutional conditions under which the sciences develop, but not in the applications of science except insofar as these affect directly the state of the sciences as such. Such information would aid the Foundation in performing the following functions defined for it under the law: (a) to develop a national policy¹ for the promotion of basic research and education in the sciences; (b) to appraise the impact of scientific research upon industrial development and the national welfare; (c) to correlate the Foundation's research programs in the various sciences with other private and public research programs; (d) to evaluate the several federal research programs.

This development led the Policy and Planning

Board to reconsider its decision to undertake the planning study focussed primarily upon psychology as a social institution. It was agreed that the entire problem would be reviewed at the annual meeting in May, and that any further effort to organize the planning study would be suspended.

After lengthy discussion at the May meeting, the following decisions were reached: (a) that since the National Science Foundation appeared ready to sponsor immediately a study focussed upon psychology as a science, it would be desirable to submit a proposal to the Foundation for the support of such a study; (b) that a supplementary study concerned with psychological practice, supported by other foundations, might be developed later as a means of completing the study of the profession as a whole. The Board noted that since psychological practice and practitioners exert a very definite influence upon psychological science, these relationships would need to be appraised in a definitive study of psychological science as such. Applied research would without question be included.

PROPOSAL SUBMITTED TO THE NATIONAL SCIENCE FOUNDATION

Two sets of problems were outlined in the proposal sent to the National Science Foundation: (a) the evaluation of the status of psychological science, including general scientific methodology, theoretical development, and empirical knowledge; (b) an analysis of the occupational, educational, and institutional relations of scientific psychology, including supply, demand, and utilization of scientific manpower in the various branches of psychology, and other important social conditions affecting psychological research. The problems which might be studied in each of these project areas will be listed below, followed by a discussion of procedure and budget.

Evaluation of Psychological Science (Project A)

The outcome of this part of the program would be a series of publications—articles, monographs or books—each concerned with an aspect of psychological research or theory. The whole series would be planned so as to constitute a comprehensive appraisal of the methodological, empirical, and theoretical status of contemporary psychological science. These studies would not be encyclopedic handbooks of "facts and findings," but would instead stress the general logical character of the con-

¹ The Foundation's mandate to develop a "national policy for the promotion of basic research and education" relates only to policy concerning federal programs in support of science. The Foundation does not attempt to formulate policy relative to the course of scientific development in general.

cepts and propositions which constitute scientific knowledge in the major branches of psychology. It is expected that the following subjects would be treated, although not necessarily in discrete publications:

1. Historical development of psychology.
2. Logical foundations of psychology in general (consideration of kinds and levels of concepts, propositions, and theoretical systems in different areas of psychology).
3. The status of empirical knowledge in special branches of psychology—a series of topical appraisals.
4. The nature and status of applied or “technological” knowledge in psychology.
5. Analysis of the systematic interrelationships among the different fields of psychology—a comparative study of methodology and theory.
6. The systematic relationship of psychology to other disciplines—especially to the biological and to the social sciences.
7. Mathematical representation of psychological constructs and propositions.
8. Research design and statistical analysis in psychology.

Occupational, Educational, and Institutional Relations of Psychology (Project B)

The problems to be investigated in this project relate to the social counterparts to the structure of psychological knowledge. The following is a list of the more important issues:

1. *Manpower analysis.*
 - a. Studies in the supply, demand, and utilization of psychologists.
 - b. Differential characteristics of research psychologists in the various branches of psychology.
 - c. The social correlates of manpower relationships.
2. *Psychological education.*
 - a. Characteristics of students who enter psychology, as compared with those choosing other fields.
 - b. Factors influencing the choice of psychology as a profession.
 - c. Patterns of undergraduate curricula, in relation to effectiveness of preparation for graduate study.
 - d. Methods of selecting graduate students and of placement in special areas.
 - e. The content and organization of graduate education in psychology.
3. *Financial support of psychological research.*
 - a. Level and distribution of support in the several branches of psychology.
 - b. Sources of financial support, and the effects of special interests on the balance of research effort.
 - c. Relationship of supply of research psychologists in different fields to available funds.
 - d. Economic status of research workers in psychology.

4. *Institutional arrangements for psychological research.*
 - a. Individual research combined with teaching or other professional activity.
 - b. Organized research in universities, governmental agencies and private agencies (including interdisciplinary research).
 - c. Contract research—the problem of balance between basic and applied research.
 - d. Field research—the problem of the interaction between research and “operations.”

5. *Public attitudes affecting psychological research.*

6. *Interprofessional and interdisciplinary relationships.*
 - a. Overlapping research interests in the biological and social sciences.
 - b. Extent and effectiveness of interdisciplinary research.
 - c. Trends in interdisciplinary research relationships.

Administrative supervision. The study would be conducted under the general auspices of the Policy and Planning Board, but a special administrative committee would be established to plan and coordinate the work. This committee would have members qualified in each of the two project areas described above. It would work closely with the two project directors for these areas, and with the two special technical subcommittees to be established. At least one member from the Policy and Planning Board would serve as an *ex officio* member of the administrative committee. Dael Wolfe will serve as chairman of the administrative committee, which will have a total of seven members.

Time span and schedule. A total of at least three years would probably be required to complete the investigation. In the case of both projects, the work would seem to fall into two stages: (a) an initial period devoted to planning and exploratory work (approximately a year); (b) a following period of some two years devoted to the completion of the projects developed during the exploratory period. It is hoped that the work can begin in October 1952.

Budget. It was estimated that at least \$150,000 would be required for the entire program. The Policy and Planning Board decided, however, to request initially only the amount needed for the exploratory stage—\$41,800. In the light of the experience gained in the first year it would be possible to arrive at more realistic figures for each of the two succeeding years.

Staff. The Board is happy to report that two highly qualified psychologists have agreed to serve as directors, respectively, for the two projects:

Sigmund Koch of Duke University for Project A (the evaluation of psychological science); Kenneth E. Clark of the University of Minnesota for Project B (the occupational, educational, and institutional relations of psychology).

In the case of Project A no additional professional staff is likely to be required. The nature of the program is such that the greater part of the work must be done by the individual psychologists who will write upon selected topics. But the project director will have an advisory committee and perhaps special consultants to assist in the difficult task of planning the program. The following are some of the tasks to be performed by the director and his associates:

1. To determine the most appropriate set of topics in terms of which to make such an appraisal.
2. To define objectives, standards, and procedures such as would tend to maximize the commensurability of the several contributions.
3. To secure suitable individuals for the difficult task of writing the evaluative monographs.
4. To devise appropriate means whereby each of the contributions would itself be appraised.
5. Possibly, to prepare a concluding evaluation of the entire project and hence of the field of psychology as a whole.

Since Project B would involve the collection and analysis of empirical data bearing upon the general social status of psychology, a central research staff would be required. The nature and size of this staff cannot be estimated precisely until after the exploratory stage of the study has been completed. But it is possible that a research group would be organized in the Central Office of the American Psychological Association in Washington, D. C. It would be necessary, however, to enlist the cooperation of psychologists throughout the country in order to make an effective attack upon the varied and complex problems outlined above for Project B.

Another source of assistance in Project B would be the committees of the APA and of its divisions. One of these in particular—the Education and Training Board—is now in position to play an important role in the study. It has a central staff consisting of a full-time executive officer and clerical assistants. Its five committees are concerned with the major problems of undergraduate and graduate education in psychology. Certain of these committees have already formulated proposals for studies of special problems within their respective areas.

Similarly, the Association's Committee on Public

Relations has planned a study which might well be integrated into the program of Project B. This Committee could render valuable assistance in relation to the general study of the status of psychology in the thinking of various "publics" which influence the course of its scientific development. Other committees of the APA and of its divisions, as well as individual members, could contribute research suggestions or proposals. If funds are made available, there will be further announcement in the *American Psychologist* concerning procedure in submitting such proposals.

ROLE OF THE APA IN THE ADVANCEMENT OF SCIENTIFIC PSYCHOLOGY

The decision of this Board to carry out a systematic study of scientific psychology represents the culmination of an interest first expressed in the Policy and Planning Board's 1948 report (*Amer. Psychologist*, 1948, 3, 191–192). Noting the preoccupation of the APA with immediate practical problems since its reorganization in 1945, the Board stressed the need for greater concern with long-range issues, particularly those related to the status of psychological science. This need was to be met partly by the preparation of a research policy report which would indicate: (a) the serious gaps in the systematic knowledge of psychology; (b) the sources of financial aid and their effects upon the balance between pure and applied research; (c) the fields in which individual and group research effort, respectively, might be most effective; (d) the possible advantages of central research coordination and planning. This research policy report was never prepared, although in 1949 the Board did issue a special supplement to its annual report entitled "Standards for Appraising Psychological Research" (*Amer. Psychologist*, 1949, 4, 320–328).

In its annual report for 1951, the Policy and Planning Board reverted to the question of the responsibility of the APA for the development of scientific psychology. In a discussion of APA committee structure, interest was expressed in the possible establishment of a "scientific development board," which might perform the following functions:

... the collection of information concerning the level and distribution of support for research in different fields; study of supply of research personnel, in relation to present and potential need; sponsorship of research bulletins or monographs, particularly on the evaluation of methodology and theory in various fields; promotion of intra- and inter-

disciplinary coordination of research interests and activities; advice to foundations and government agencies on research policies and programs; study of possible means of effective coordination of research with "action" programs and professional practice (*Amer. Psychologist*, 1951, 6, 533).

The Board in its 1951 report did not formally recommend the creation of such a board. The problem was left for future consideration, as dictated by the needs and responsibilities of the Association. Then in February 1952, when the proposed study for the National Science Foundation was under discussion, it was decided to put on the agenda for the annual meeting in May the general question of the APA's role in the advancement of psychological science. One aspect of this question was the problem of additional organizational machinery for performing whatever special functions might be appropriate for the APA in this area. The proposed study of psychology as a science was regarded as an example of such a function.

For the guidance of the Board, the officers and members of the Council of Representatives of the APA were asked in April to express their views on these questions. An accompanying memorandum outlined some of the possibilities for the expansion of the APA's activities in support of scientific psychology. Comments were particularly requested concerning the proposed investigation of psychology as a science and the establishment of a special scientific development board. Only about 30 per cent of the group replied. Most of them favored the investigation of psychology, but less support was shown for a special scientific board. A variety of other suggestions was offered whereby the APA's support of the scientific aspects of psychology might ostensibly be strengthened. Improvements in the Annual Convention and increased support of scientific publications were most frequently mentioned.

With this general background, the Policy and Planning Board at the May meeting reviewed in some detail the broad question of the APA's responsibility for the advancement of scientific psychology. The discussions recognized the difficulty of maintaining a satisfactory balance among the diverse interests of the members in such a heterogeneous organization as the American Psychological Association. The professional functions of applied research and practice appear to require more institutional machinery and activity, mainly because these are the main points of social contact with psychology's varied "publics." Yet the necessary pre-

occupation with these relationships has often led to discontent on the part of members interested primarily in psychology as science. In extreme cases the complaints exhibit an interesting kind of inconsistency: an individual will complain about the APA's neglect of scientific psychology in favor of applied psychology and yet assert that the Association should not extend the scope of its institutional concern with the science of psychology. It should be added that some members who approve further steps towards organizational concern with the science are highly in favor of more and better support of the two main forms of the Association's present efforts in behalf of scientific psychology: scientific publications and meetings.

In this connection, the Board thinks it is appropriate to stress the magnitude of the APA's effort in scientific publication. Two facts epitomize the situation: the majority of the Association's journals are in the "scientific" category and the greater part of the APA's resources goes to support the journals. Many members complain that the journals make a "profit"; the method of accounting has usually resulted in a "bookkeeping" profit in the accounts of most of them. But a large part of the "profit" comes from the dues of the members, most of whom now are at least partly concerned with applications of psychology. The budget for the journals is now almost a quarter of a million dollars annually, and publication costs are rising.

The conclusions of the Board from its discussion of these issues can be summarized as follows: (a) there is no present need to change the permanent organizational structure of APA by creating a "scientific development board"; (b) the proposed study of scientific psychology, under the auspices of the National Science Foundation, should yield significant information bearing upon the long-range responsibilities of the Association for the advancement of psychological science and upon the appropriate means for meeting these responsibilities. The Board thinks that it is in general undesirable to establish permanent committees or boards unless the need for them is clear. Otherwise, it is sounder policy to form special committees for specific purposes and to discontinue them when their assignments are completed. A good example of such a committee is the administrative committee which would monitor the study proposed to the National Science Foundation.

In concluding this seventh annual report, the

Policy and Planning Board affirms its belief that the comprehensive investigation of psychology as a science will contribute greatly towards the clarification of many of the pressing issues which arise from conflicting interests within the Association. In the light of the experience gained with the study proposed to the National Science Foundation, it should be possible to extend the investigation more effectively to include the remainder of the functions and relationships of the profession. The results of these studies should better enable this Board, other agencies of the Association, and individual psychologists "to ad-

vance psychology as a science, as a profession, and as a means of promoting human welfare."

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SCIENTIFIC WRITING AND THE GENERAL PROBLEM OF COMMUNICATION

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WE have recently had occasion to consider what sort of guidance can be given to graduate students in their scientific writing, especially in the use of Flesch's methods (2, 3) for appraising the effectiveness of written English. There has been some recent discussion of the problem, but it seems to us that some of its larger aspects have not been formulated clearly.

We approach the problem with Boring's assumption (1) that doing an experiment is not more important than writing it up for publication. A solitary student might conceivably experiment and theorize to satisfy his own curiosity, but a study that is unreported does not contribute to public knowledge. It does not advance science. Even more: a study that is reported but does not get read is no better than one that remains unpublished. It is therefore the scientist's business to write in a way that increases the likelihood that his paper will be read as well as understood. We shall simply take it for granted in this discussion that precision is of first importance in scientific writing; having assumed that, we are concerned here with the question of *readability*, the property of writing that attracts a reader and holds his attention. As far as he can achieve it, readability is as important for the scientific writer as it is for the novelist.

How is readability to be improved? Clearly it would help to have some objective index to show where one has strayed from the path of virtue, a literary Wasserman test to show what writing is in good health and what needs treatment. But readability must be a complex quality and any single score would be a very rough index indeed. We believe that the Flesch count (2) did have merit as a rough index of some of the factors in readability, but it is not surprising that Flesch has felt it necessary to abandon this single index in favor of two independent ones (3).

The earlier Flesch count was arrived at by counting affixes in words and words in sentences, combined with a count of the number of references to

persons. It gave some useful information about scientific writing, and was at once recognized as valuable by instructors in psychology, if only for applying to their graduate students and not to themselves. That it had shortcomings was also seen promptly, and Flesch's later scheme (3) has tried to get around the defects.

Two scores are now provided: one representing *reading ease* (a difficulty index, based on word and sentence lengths), the other *human interest* (number of references to persons). The scores are arranged to run from 0 to 100. A top score of 100 on reading ease means that the material will be understood by people who have got through grade four; top score on human interest indicates "enough human interest to suit the reading skills and habits of a barely 'functionally literate' person" (3, p. 225). As one might expect, scientific writing scores low on both scales, fiction and comics score high, with good nonfiction in between.

This change certainly improves things. The earlier Flesch count simply said that *Reader's Digest* is more readable than the *New Yorker*, a decision that some of us might question. The new scales say that *Reader's Digest* has greater reading ease, the *New Yorker* greater human interest, a more acceptable conclusion. The earlier count made Koffka (5) more readable than James (4), which was a state of affairs that made Harvard men shudder (7). It is now suggested that such a reversal of form occurred only because the earlier single scale did not give James enough credit for the human interest of his writings.

This putting-Koffka-in-his-place seems to have so pleased some psychologists that they have come to consider the new Flesch scales as giving a valid account of the readability of scientific writing, a good estimate of its effectiveness as communication. Reprints of Flesch's article are available in many departments (including our own) and graduate students are encouraged to use it. This being so, and considering the importance of good writing in sci-

ence, let us see what the value of Flesch's method is and what it is not.

FLESCH'S TWO SCALES

We propose first that the human-interest scale be forgotten completely, at least for the appraisal of scientific writing. Even if it is true that mentioning people enlarges the audience of interested readers (by including the less literate), it does not follow that within a literate scientific group the same relation holds. The same piece of writing may appeal very differently to different groups. The changes one would make in the *Yale Review* in order to increase its subway sale might lead to its disappearance from the shelves of the University Book Club. Scientists by common consent are peculiar people with peculiar reading habits, and any scale of human interest for general use has doubtful validity for scientific journals. Scientists are also human, and do often read *Reader's Digest* and *Collier's*, but not at moments when they are thinking about an experimental problem. Mixing up one interest with another may spoil the pleasure of both.

At any rate, it is not yet clear that references to human beings in a scientific paper have any value for increasing its readability. Perhaps this may be shown in the future. At present, we believe, the human-interest scale simply distracts attention from the real problem of how to use the second scale, the measure of reading ease.

The proper use of this second scale requires that we recognize two things. One is that reading difficulty is not only the difficulty of understanding words and sentences; there is also the way the sentences are related to one another in the paragraph, and paragraphs in the chapter or section. A measure of word or sentence difficulty will undoubtedly correlate with over-all difficulty, but it should cause no surprise to find that there are writers whose words are simple and whose sentences are short, but whose writings are impossible to read. With such a writer, the Flesch scale of reading ease will be totally misleading. There is no scale at present for measuring this larger aspect of readability, but because one has no measure for it one must not forget it. To this problem we shall return in the following section.

The second point one should consider about the scale of reading ease is that comprehensibility is not simply and directly related to readability (the property of reading matter that keeps a reader's

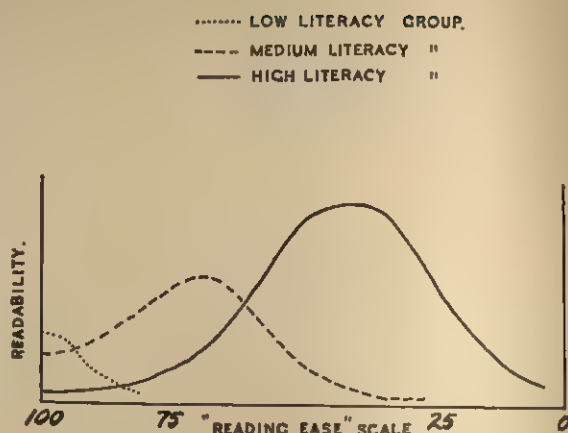


FIG. 1. Relation between reading ease and readability.

nose in the book). In other words, making something easier does not always make it more interesting or desirable. It is true that using simpler words and shorter sentences makes writing comprehensible to a larger fraction of the general population, but this relation cannot be construed to mean that for any given segment of the population (artists, plumbers, scientists) an increase in comprehensibility will necessarily make for an increase in readability.

Rather, we feel, for any homogeneous group of a particular educational level the relation between reading ease and readability is likely to be described by one of the curves in Figure 1: a certain optimum level of difficulty may be required to make the material maximally readable; too easy or too difficult writing will decrease readability. Thus it will usually happen that an increase of reading ease, in most scientific manuscripts, would increase readability, because as scientists we generally write too long sentences and make too much use of big words. But the thing can be overdone, and a reading-ease score of 100 would certainly not be a recommendation for a scientific paper. The reader may feel that this danger is remote, but there is at least one recent textbook that we find unreadable because it appears to be aimed at the lowest quartile of the freshman class. An occasional use of the Flesch scale to bring word and sentence difficulty *up* to an adult standard would also be justified.

Thus there are two reasons for denying that the Flesch scale of reading ease is a measure of readability. One is that man enjoys a certain amount of difficulty in his undertakings and is bored by what is too easy. The easiest writing is not the most

readable. The second reason, that the scale really measures only one of the factors in reading ease, offers a greater problem: we cannot suggest any measure of the remaining factors that are inherent in the larger organization of a piece of writing, and yet they must be taken into account in one's own writing and when one is trying to show a student how to write better. Let us look at this problem next.

THE ESSENTIAL PROBLEM OF VERBAL COMMUNICATION

The difficulty we are concerned with here is best seen by first considering the psychological problem of comprehending spoken rather than written language. The task that a speaker sets his listener is to achieve a two- or three-dimensional structure from a series in one dimension. It is the task of making a house *at once* out of a series of nails, boards, scantlings, and bricks delivered one at a time in a rapid series. (Conversely, at the speaker's end, it is the task of taking the house to pieces just as rapidly, and shipping the parts in the right order to allow the receiver to put it together right.) It is precisely the problem of television, to create a picture in two dimensions out of a series of events that have no locus and vary only in the degree of energy delivered from moment to moment; or the problem of the army commander whose men arrive on the field of action single file, though he must use them together distributed over the field in an organized two-dimensional pattern. Essentially, it is the problem of transforming a temporal pattern into a spatial one.

That is, though the sounds of speech are received seriatim, their effects on behavior are not seriatim and discrete. The response to one of the stimuli (words) arriving at any moment may be quite indeterminate, and become determinate only after the arrival of another stimulus as much as 5, 10, or 15 seconds later. Thus earlier stimuli must often be "held" until the later ones are delivered, these determining the significance of (the response to be evoked by) the earlier ones. This integration of discrete serial stimuli is shown in one's ability to disentangle a spoonerism (6); but also in understanding such ordinary sentences as "Whether it is large or small, you should always keep your dog on a leash" (here the first phrase with *it* can hardly have the same determinate effect as "whether *your* dog is large or small"); or even "There is hardly

any bread in the house" (where an idea of "there is hardly any" must be, to say the least, a highly indeterminate one, until the noun arrives to allow the listener to give the first four words their significance).

In reading, the problem is not quite the same as in listening: the reader who has failed to "hold" the first words of the sentence can readily go back after reading the later ones (in effect reordering the sentence). In reading, also, we may take in a word or a short phrase as a whole, not receiving the letters separately as the ear must do with its sounds. But the phrases and sentences must come seriatim, and so must paragraphs and sections. An introductory sentence in a paragraph may be fully understood only after the last sentence has been read; or the last sentence may be comprehensible only with the set, or expectancy, established by the first. As to the larger organization of written work, it is a common experience to find that one can read a scientific paper better by first reading its summary. Writers find it advisable sometimes to begin a paper by adumbrating their conclusions, for the same reason. Thus with written matter the problem is modified by the reader's ability to skip about and reread when he wants to, but in principle the fundamental difficulty of verbal communication remains: to get an over-view of a complicated structure that must be apprehended bit by bit.

For the length of a short paragraph, the required integration presents no great difficulty to the skilled reader. At this level, punctuation is also a very effective tool. It keeps the reader informed as to what goes with what; and paragraphing itself is a similar aid. At higher levels of organization, however, there are few comparable aids, and here it is that the skilled reader's problem really begins. Here too Flesch's method is of no use in estimating the extent to which a writer has helped his readers.

When it comes to "holding" a long series of paragraphs while sorting out the next one, and piling set upon set, the reader's difficulties become acute; and it is here as much as anywhere that the intelligibility of scientific writing is determined. It does not lie simply in the use of short words or short sentences (still less in multifarious social reference). To a major extent it lies in the way in which the writer helps the reader reassemble his battalions, shipped to him man by man. Figuratively, "Here begins your second battalion," "the next fifty are headquarters staff," "place the following thousand

in reserve"—which in practice might take the form, "So much for the first point," "Let me remind the reader that we are now discussing only A, not B or C," or "An alternative to the foregoing is. . ."

A most important difference between the writings of James and Koffka, referred to earlier, is the amount of help given the reader in making a coherent picture out of paragraph after paragraph, and section after section, of difficult argument. James organizes his battalions well, he keeps the reader aware of the main line of thought even while digressing from it, he maintains the outline of the picture he is trying to paint while he is filling in the detail; but with Koffka one is lost in detail as he goes from one experiment to the next, the main picture does not become steadily clearer as the details of experimentation are supplied. James's writing makes a good gestalt, Koffka's does not.

WHAT ADVICE TO THE NEOPHYTE?

It is dangerous to write about good writing. The reader is more than likely to say "Ah, so they think they can tell us how to write—let's see how well *they* do!" Our purpose here is not to offer a sample of perfect work but to consider the difficulties we all face in writing. It does seem, however, that there is a little advice to be offered, and in order to be on the safe side we offer it only to the neophyte.

Perhaps the first piece of advice is to keep on being a neophyte throughout one's professional life. Writing is an art, ultimately, and there is no set of rules that will guarantee success, nor can the writer hope to reach perfection. One must know the rules of usage, grammar, sentence structure; but one never knows for sure how all the rules are to be applied in the particular case. The final product must be a matter of individual judgment, just as the painter who knows the rules of color mixture, perspective, and so on must still add something of his own that makes him an artist.

One of the things for which there are few rules is the larger organization discussed in the preceding section. The traditional heads of the scientific paper, Introduction, Method, Results, Conclusions, Summary, are generally useful. But this particular convention sometimes must be modified; and its use is not enough by itself to guarantee clarity. Subheads within the section are often a further help; yet another rule probably should always be followed, to depend as little as possible on heads and subheads and try to write so as to be clear if

all headings were removed. This means that the signposts of organization should be incorporated in the text, and made as unobtrusive as they can be.

There is no index of success at this level except the reader himself: does he have to labor to read, or not? We need not repeat the old advice to write and lay the writing away until one can more nearly see it from a reader's point of view; or better, to have a colleague read the manuscript *and then take his criticism seriously*. What we might add to the advice is this: The writer will often not agree with the critic's specific proposals; but apart from questions of style, he should *always* assume that some change is needed in the passage to which the critic objects, even if it is not the change that has been recommended. It is worth adding further that all this applies still to us neophytes who have been writing for 10 or 20 years. The writer is unfortunate who does not have colleagues who will take the trouble to read and advise on his manuscripts; and the time one spends on a colleague's manuscript is not wasted, for a serious attempt to help some one else is one of the best ways to learn more about one's own writing.

Finally, on the artistic side, we should like to urge that the writer cultivate his ear for the rhythms of English prose. This sounds formidable but is not. We are talking only about the ordinary, everyday readability of sentence and paragraph, not implying that one should aim at writing great literature for the psychological journals. All of us have an ear that comes from reading as well as listening to spoken English, but not all of us make the most of it in our writing. The practical advice of this paper is simply to try *listening* to the phrases and sentences as one silently reads the manuscript, and to modify them freely not only for sense but (in a modest way) for euphony too. If one attends to it, one will often find that this sentence is too long—not in itself, but because the preceding ones were long also; or that another somehow needs another phrase *here* for balance, or should be a little longer to sound right. Everyone does this now, but perhaps unwittingly; what we suggest is that a conscious effort at euphony, to make one's sentences *sound right* as well as making them clear, can pay dividends in readability and therefore in the effectiveness of scientific communication.

So our advice to the neophyte is this. Take the problem of writing seriously; assume that it is as difficult and as important as the investigation to be

reported; write and rewrite,¹ aiming for both clarity and ease; and get and use all the criticism you can from others. You must know the rules of usage and grammar, and Fowler's *Modern English Usage* should be your Bible, to be used with all the reverence and skepticism that is due to a Bible. It will be salutary to use Flesch's scale of reading ease once or twice on your own writing, but you might also read and reread Quiller-Couch's *On the Art of Writing*. Develop your ear for phrase and sentence, on the one hand, and on the other keep working at the art that none of us will fully master, of using complicated detail to build a simple outline of main ideas for the reader. As Boring (1) puts it, good writing is good manners: your problem is both to please and to help your public. This you can do only when you learn how to be the first victim of

your writing, how to anticipate a reader's difficulties and to hear yourself as others hear you.

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¹It is a poor paper that would not be better for one more revision.

A PRELIMINARY SURVEY OF THE DISTRIBUTION OF PSYCHOLOGISTS IN THE UNITED STATES

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RECENTLY attention has been given to gathering census data on the nation's psychologists and to classifying them according to their fields of employment. An excellent survey by Black (1) in 1948 provided a picture of employment in psychology, the data being classified according to general areas and specific positions. Whereas the Black study, based on the full biographical entries in the 1948 APA Directory, presented a breakdown in terms of percentages for the entire country, the present survey classifies the 1950 data from a new viewpoint: the geographical distribution of psychologists employed within the continental United States.

The number of psychologists (APA members) employed in each state and the proportions of psychologists to state populations are reported graphically (Fig. 1) and in tabular form (Table 1). Proportions of APA members holding different degrees and having certain occupational affiliations in each state are recorded in Table 1.

Data for this survey were gathered from the following sources: Figures representing gross populations by states were obtained from the preliminary reports of the 1950 U. S. Census of Population (3). From the 1950 Directory of the American Psychological Association (2) a two-dimensional cross-classification of all members employed in the United States was prepared, the data being assembled in such a way as to show how many members, holding a given degree and having a given occupational affiliation, are employed in each of the forty-eight states and the District of Columbia.

Data from these two sources were combined and set forth graphically in Fig. 1 from the figures shown in columns 1, 2, and 3 of Table 1. The map in Fig. 1 exhibits marked regional characteristics, and from the over-all perspective which it affords, the reader can make his own comparisons and speculate as to what conditions may be basic to or at least concomitant with the distribution of psychologists.

In preparing the cross-classification referred to above, five degree categories were employed: All doctor's degrees were assigned to PhD, whether they were EdD, ScD or other. All master's and bachelor's degrees were assigned to MA and AB respectively. Medical doctors were classified separately, and the "Not Stated" category was reserved for those for whom no degree was specified. Percentages of APA members falling within these categories are recorded for each state in columns 4 through 8 of Table 1.

Eleven primary occupational affiliation categories were chosen as follows, with source of income as the prime criterion: College and University, Primary and Secondary Schools, Federal Government Employment, State Employment, Other Public Employment, Private Employment, Private Practice, Medical Affiliation, Religious Affiliation, Other, and Not Specified. Since the descriptions in the 1950 APA Directory were frequently inadequate to meet the demands of the classification adopted, figures obtained in eight of these categories cannot be relied upon. Three categories (College and University, Federal Government Employment, and Private Practice), however, were readily identifiable, and percentages for these affiliations are reported by states in columns 9 through 11 of Table 1.

It was suggested above that various factors may be basic or related to the geographical distribution of psychologists. In support of this hypothesis the findings of an exploratory study are reported in condensed form in Table 2. Figures for this table were prepared from the original data and from a preliminary Census report of general population characteristics by regions (4). Since it is the ratios and percentages in which we are interested, rather than actual population figures, only the former have been reproduced in Table 2. To facilitate inspection these ratios have been assigned positions (shown in parentheses) on a descending scale (1 through 4). The relationships observable in this regional table for a limited number of population

TABLE 1

Distribution by states of members of the American Psychological Association in 1950

State	Population	Number of Psychologists	Number of Psychologists to Each 100,000 Population	Degree Reported in APA Directory					Occupational Affiliation		
				PhD %	MA %	AB %	MD %	Not Stated %	College and University %	Federal Government Employment %	Private Practice %
Alabama	3,052,754	34	1.1	64.71	32.35			2.94	55.88	29.41	2.94
Arizona	745,259	23	3.1	73.91	21.74			4.35	65.22	17.39	4.35
Arkansas	1,901,631	19	1.0	68.42	26.32	5.26			68.42	26.32	
California	10,490,070	759	7.2	51.65	34.65	5.40	.79	7.51	48.35	10.01	5.93
Colorado	1,318,048	77	5.8	49.35	45.45	3.90		1.30	62.34	14.29	2.60
Connecticut	1,995,263	183	9.2	55.19	33.88	1.09	2.73	7.10	50.27	6.01	4.37
Delaware	316,609	19	6.0	47.37	52.63				31.58		
District of Columbia*	797,670	294	36.9	44.90	41.50	4.42	1.70	7.48	17.01	59.52	.34
Florida	2,743,736	89	3.2	67.42	24.72	1.12		6.74	48.31	14.61	3.37
Georgia	3,433,190	43	1.3	67.44	25.58			2.33	69.77	11.63	
Idaho	585,092	12	2.1	75.00	16.67				8.33	75.00	8.33
Illinois	8,684,513	570	6.6	44.56	39.99	5.79	1.75	7.89	44.74	9.47	2.11
Indiana	3,921,213	140	3.6	59.99	31.43	2.14	.71	5.71	72.14	7.14	.71
Iowa	2,612,598	95	3.6	58.95	31.58	3.16	2.11	4.21	73.68	5.26	
Kansas	1,894,390	100	5.3	57.00	32.00	7.00	1.00	3.00	52.00	14.00	
Kentucky	2,921,708	67	2.3	40.30	49.25	1.49		8.95	47.76	11.94	1.49
Louisiana	2,667,022	47	1.8	57.45	27.66	4.25		10.64	55.32	6.38	2.13
Maine	910,456	24	2.6	45.83	37.50	8.33	4.17	4.17	62.50		
Maryland	2,324,243	119	5.1	52.10	33.61	3.36	3.36	7.56	47.06	12.61	2.52
Massachusetts	4,664,284	333	7.1	57.36	27.63	3.00	3.00	9.01	54.35	6.61	1.80
Michigan	6,308,794	310	4.9	48.06	41.93	1.61	.65	7.74	57.42	4.19	1.93
Minnesota	2,968,135	184	6.2	41.85	42.39	8.69		7.07	59.78	8.15	1.09
Mississippi	2,173,373	24	1.1	79.17	16.67			4.17	70.83	8.33	
Missouri	3,933,636	100	2.5	50.00	32.00	10.00	1.00	7.00	66.00	2.00	2.00
Montana	587,337	11	1.9	54.55	36.36	9.10			72.73		
Nebraska	1,318,079	28	2.1	82.14	14.29			3.57	96.43		3.57
Nevada	158,283	6	3.8	50.00	50.00				83.33		
New Hampshire	529,880	27	5.1	55.56	29.63			14.81	59.26	7.41	
New Jersey	4,822,528	225	4.7	50.67	36.89	2.22	.44	9.78	27.99	4.89	1.78
New Mexico	677,152	18	2.7	55.56	27.78			16.67	66.67	11.11	
New York	14,741,445	1417	9.6	47.14	40.08	4.30	1.06	7.41	39.66	9.67	5.01
North Carolina	4,038,814	87	2.1	59.77	27.59	2.30	1.15	9.19	79.31	1.15	1.15
North Dakota	617,965	9	1.5	77.78	22.22				55.56	22.22	
Ohio	7,899,095	400	5.1	47.00	41.00	5.25	.50	6.25	51.25	4.25	1.75
Oklahoma	2,223,650	39	1.7	64.10	30.77			5.13	84.61	2.56	
Oregon	1,512,100	42	2.8	69.05	19.05	4.76	2.38	4.76	71.43	9.52	2.38
Pennsylvania	10,462,628	482	4.6	40.04	49.79	1.45	.21	8.51	48.13	5.60	2.07
Rhode Island	779,931	25	3.2	48.00	36.00	8.00		8.00	52.00	4.00	
South Carolina	2,107,432	18	.9	44.44	44.44	5.56		5.56	72.22	11.11	
South Dakota	650,029	6	.9	50.00	50.00				83.33		
Tennessee	3,282,271	68	2.1	57.35	33.82	4.41		4.41	58.82	16.18	1.47
Texas	7,677,832	158	2.1	65.19	28.48	3.16		3.16	53.80	28.48	1.27
Utah	686,797	24	3.5	45.83	45.83			8.33	54.17	12.50	4.17
Vermont	375,833	19	5.1	68.42	31.58				73.68		
Virginia	3,270,322	90	2.6	38.89	41.11	3.33	1.11	15.56	44.44	15.56	1.11
Washington	2,363,289	94	4.0	53.19	38.30	3.19		5.32	69.15	9.57	3.19
West Virginia	1,999,097	24	1.2	58.33	37.50			4.17	79.17		4.17
Wisconsin	3,421,316	107	3.1	58.88	31.77	1.87	2.80	4.67	50.47	4.67	2.80
Wyoming	288,800	6	2.1	66.67	33.33				100.00		
United States	150,697,361	7095	4.7	50.37	37.51	3.88	1.06	7.19	49.12	10.81	2.86

* The disproportionately large ratio of 36.9 represents service to federal government agencies rather than availability to the population of the District.

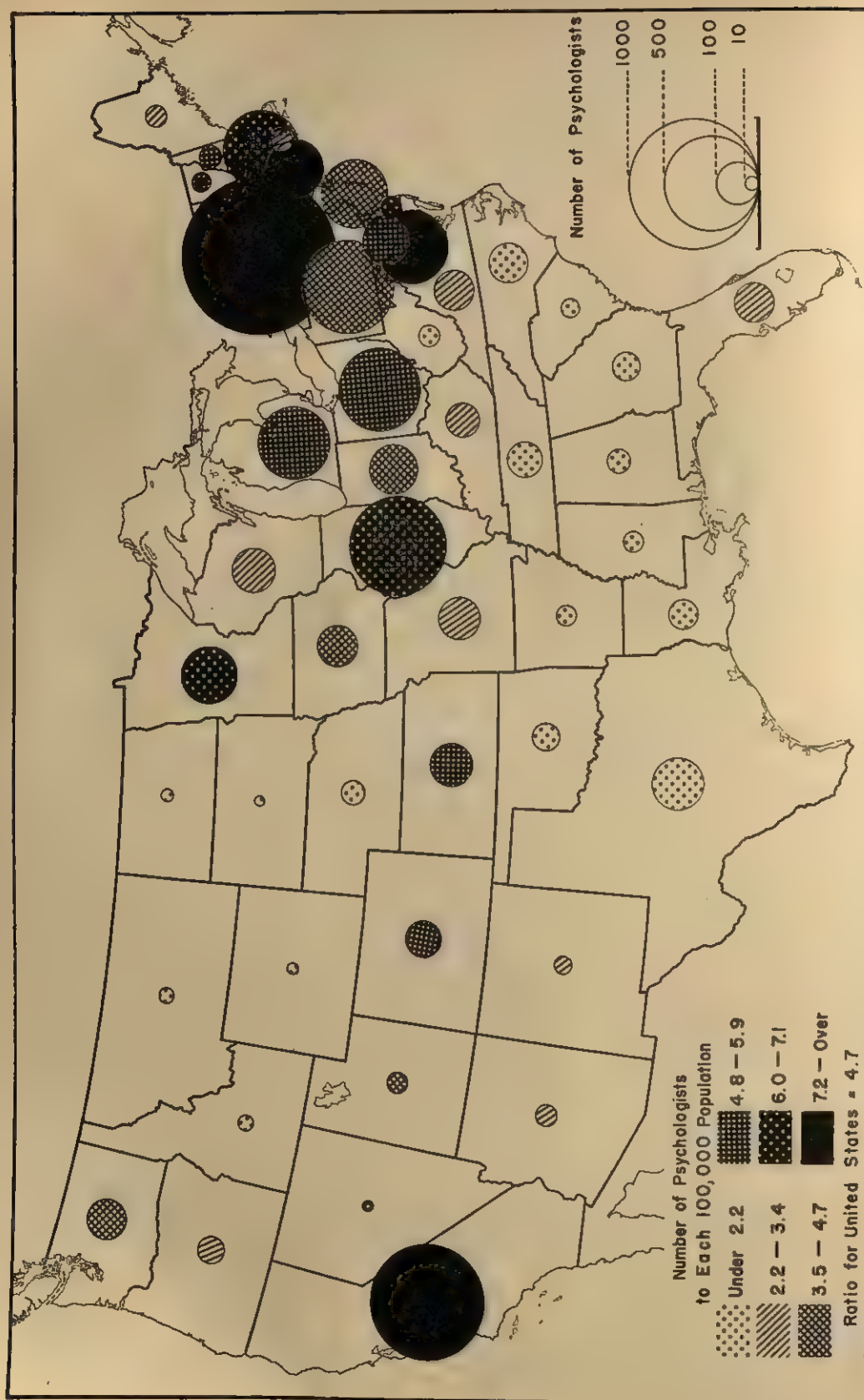


FIG. 1. Number of psychologists employed in each state and proportions of psychologists to state populations.

TABLE 2
*Regional distribution of psychologists
 and some population characteristics*

	Northeast	North Central	South	West
Population	39,478,000	44,461,000	47,197,000	19,562,000
Number of psycholo- gists	2,735	2,049	1,239	1,072
Number of psycholo- gists to each 100,000 population	(1) 6.9	(3) 4.6	(4) 2.6	(2) 5.5
Percentage of Negroes	(2) 5.0	(3) 4.8	(1) 21.6	(4) 2.9
Percentage of foreign- born whites	(1) 13.2	(3) 5.9	(4) 1.6	(2) 8.0
Percentage of urban population	(1) 79.5	(3) 64.1	(4) 47.8	(2) 69.5
Percentage of number of persons from 18 through 24 years of age who are in school	(3) 18.9	(2) 20.2	(4) 15.3	(1) 23.1

characteristics suggest that rank-order correlations might be profitably prepared on the basis of state ratios and numerous additional variables (educational facilities, per capita wealth, and industrial-agricultural economy ratios come to mind at once) until a patterning of conditions should begin to take

shape. Ultimately it is only such a constellation which would be meaningful, since each variable alone may be necessary, but only a combination of many will be sufficient.

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3. U. S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS. 1950 Census of Population, preliminary counts. Series PC-3, No. 4. Washington 25, D. C., for release November 5, 1950.
4. U. S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS. 1950 Census of Population, preliminary reports. Series PC-7, No. 3, General characteristics of the population, by regions, April 1, 1950, for release April 30, 1951.

Manuscript received August 6, 1952

UNIVERSITY ADMINISTRATION OF PSYCHOLOGICAL CLINICS

GEORGE F. J. LEHNER AND JAMES F. T. BUGENTAL

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AS clinical training has become an area of important concern to PhD-granting institutions, pressure to establish clinics within university departments of psychology has increased. The establishment of such clinics in turn gives rise to various administrative problems, among which the following are considered here: (a) organizational relationships between clinics and departments of psychology; (b) academic-clinical personnel teaching loads; (c) adjustments of teaching load and student-teacher ratios; (d) use of differentiating titles; (e) provisions for additional assistance or extra remuneration; (f) equation of promotional recognition; (g) aids for research, etc.

Additional important administrative problems revolve around the need of re-evaluating and perhaps reconceptualizing the functions of the graduate training program in psychology. Clinical psychology now calls, in effect, for the integration of a *professional* and *practicum* training program into the traditional structure for advanced *scientific* and *academic* preparation.

At the time of the Boulder Conference (1) some discussion was devoted to these problems; but adequate information concerning methods of handling these situations was lacking. The present report is an effort to obtain such information and to make it available as a guide and basis for further thought. The information was obtained by a questionnaire sent to each of the thirty-five schools offering APA-approved doctoral training in clinical psychology. Thirty-one schools, or 89 per cent, responded.

The following represents a brief summary of information on the various problems considered.

Organizational Structure of Departmental Clinic

Departments with clinics in operation	25
Departments with partial clinic operation	2
Departments with no clinic operation	4

It is apparent that an overwhelming majority of the departments operate some type of clinic. The two "partial" operations represent one school that has student counseling facilities only and one that

has a cooperative clinic arrangement with its medical school. One of the schools reporting no clinic operation had plans to open one during the coming (now, current) year. An active departmental psychological clinic is, therefore, a definite part of the educational picture in these schools. Nor is this altogether a new phenomenon, as the following data will indicate:

Departments with clinic in operation		
	0 to 2 years	6
	3 to 5	3
	6 to 10	4
	11 to 15	1
	16 to 20	2
	21 to 30	3
	31 or more	4

The listing above does not include two additional departments which gave only the general answers "several" and "years" to the question as to the length of their operation. The entire range is from six months to 54 years, with the median at 7½ years.

Size of clinics also varies considerably, as shown below in terms of staff and space utilization:

Number of full-time professional staff:	average = 5.04
	range = 1 to 13
Number of part-time professional staff:	average = 4.43
	range = 1 to 9
Number of total professional staff:	average ¹ = 5.57
	range = 1 to 13

A majority of the reporting schools (18) utilized full-time staff only; a relative few (6) used both full- and part-time personnel. Apparently the type of clinical appointment so familiar in medical and dental schools has not yet developed in the psychological clinic.

¹ This average is, of course, not a mean of the two previous averages since the total staff average is computed from the distribution of total staff numbers for all schools reporting.

Number of rooms used by clinic exclusively:	average = 10.45 range = 1 to 34
Number of rooms shared:	average = 4.70 range = 1 to 11
total:	average = 12.48 range = 3 to 34

Nearly all departments (23) have set aside some space for the exclusive use of the clinic, but a good number (18) also have found it necessary to devote additional rooms on a part-time basis to this function. In the future the requirements of psychological clinics will necessitate greater consideration when space needs for departments of psychology are planned.

Personnel Distinctions

As the psychology department undertakes the development of a clinic questions arise as to whether or not staff members devoting time to its supervision or practice should, in the administrative setup, be distinguished from staff members performing more usual academic tasks. No uniformity of practice in this regard is evident in the questionnaire responses.

Departments in which distinctions of some kind are made:	12	44%
Departments in which distinctions are not made:	15	56%
Nature of distinctions:	budget = 5 titles = 5 other = 4	

Among "other" distinctions were included (a) the practice of making the clinical staff responsible to the dean and president of the institution and (b) the practice of establishing the clinic as a separate organization.

Teaching Load

The problem of how to equate supervisory time in the clinic with class or seminar time is a difficult one. No clear pattern emerges from replies to questions relating to the relative teaching loads of clinic and nonclinic staff members.

Average teaching load of clinic vs. nonclinic staff:	
same = 11	41%
clinic less = 12	44%
uncategorizable = 2	15%
Course load (estimated):	clinic average = 2.38 range = 1 to 4
	nonclinic average = 3.09 range = 2 to 4

In general, only about one-half of the schools recognize the greater time demands of clinical supervision by providing reduced teaching loads. Such reductions are small, averaging less than one full course. However, the load actually carried by the clinicians tends to be weighted in the direction of their clinical interests. Time spent in clinical supervision averaged 49 per cent and time on courses preparatory to clinical practice averaged 45 per cent.

Despite the evidence that most clinical staff members devote a major proportion of their time to supervising clinical practice and teaching preparatory clinical courses, only six schools show that the entire course assignment of such clinical staff members is so constituted. In most cases these staff members carry a number of nonclinical teaching responsibilities as well. With the desirability, expressed by many, of integrating the clinical psychology training program with the total body of psychology, some such overlap in clinical and non-clinical duties by teaching personnel would appear desirable.

When all methods of easing the load of the supervising clinician are combined, the situation appears as follows:

Departments reporting reduced load	18	67%
extra assistance	10	38%
other	2	8%

The total is greater than 100 per cent, since some departments employ more than one means of equating work loads. Reduced teaching load is the most frequent method of balancing assignments. Slightly less than half as many schools provide extra assistance for clinical personnel, and two schools use still other means (e.g., exemption from the supervision of theses).

From one school well known for its leadership in clinical training comes this comment:

I think the most useful idea we can pass on to you is that of a yardstick for evaluating and equating the various types of services rendered by clinical staff members. . . . Our policy here is to call each half-day spent in the clinic the equivalent of teaching a one-hour course. Similarly, a person is allowed the equivalent of one hour of teaching for each two doctoral dissertations which he is actively directing. Each staff member is expected to work what would be the equivalent of ten teaching hours. . . .

A somewhat similar, but more liberal, plan is reported by another department which equates two

hours of clinic supervision with one hour of lecture course time.

Work Load Ratio

Further inquiry was made by the questionnaire into the elements constituting the work assignment of clinicians and nonclinicians. The question was asked, "Are courses requiring clinical supervision of student work considered as constituting the same teaching load as lecture courses of equivalent units?" The answers were largely in the affirmative. (Two schools did not reply to this question.)

Yes	18	72%
No	7	28%

Although semester- or quarter-hour ratings of clinical-supervisory and other courses may be treated as equated, it is generally true that the former have lower student-instructor ratios.

Student-clinic supervisor ratio:

Undergraduate level

No offering	= 16	88%
Some offering	= 2	12%
Average ratio	= 4.5 to 1	

Graduate level

Average ratio	= 5.3:1	
Range	= 2:1 to 15:1	

Also noteworthy in the data above is the small number of institutions still offering clinical experience to the undergraduate student.

Two other questions bear on the work load ratio problem: "Are clinic staff members given additional assistance (e.g., course readers, teaching assistants, clerical-secretarial help) over that given to non-clinical staff members?"

Yes	11	48%
No	12	52%

In view of the heavy demands on the clinicians' time, it is surprising to find that 52 per cent of the departments report no consideration of this fact—or perhaps they feel this is covered with some reduction in teaching load.

Another such practical problem is dealt with in the second question, "In the making of administrative and departmental committee assignments and the assignments of responsibilities for thesis supervision, is any distinction made between clinical and nonclinical staff members?"

Yes	5	19%
No	21	81%

The relatively few schools making distinctions of this type reported various patterns, e.g., clinical staff not used on committees, clinical staff responsible only for clinical theses, clinical staff given administrative responsibilities only.

The evidence supports the frequently expressed view concerning the difficulty of superimposing professional training on the more usual academic program. As here reported, the clinicians are frequently doing double duty, devoting almost full time to the usual teaching duties, yet carrying the additional work involved in clinical training. Thus, it is not surprising that the clinician's complaint of lack of time is heard so frequently.

Indirectly bearing on the work load of the staff members and presenting a somewhat different pattern of graduate education which may have much promise for the future is the policy outlined in the reply of one of the clinical training institutions:

All clinical practice courses involve a linkage with lecture discussion courses, and we have no courses, other than seminars, which do not involve a laboratory or practicum and no laboratories or practicums which do not involve academic courses. . . .

This same school then goes on to describe its core clinical courses which are taught by "teaching teams," for example:

Course ____: A teaching team of one senior staff member, one graduate assistant, and one assistant instructor handle 18 students.

Course ____: One senior staff member, two assistant instructors, and one graduate assistant comprise a team to handle 30 students.

Course ____: One senior staff member, one assistant instructor, two field staff people (PhD), and one graduate assistant handle 20 students.

Research Provisions

Despite the many statements in the professional literature about the need for and the value of research in the field of clinical psychology, only one school of twenty-five reporting makes any special provision to aid the research efforts of clinical staff members. Such a situation, in the context of the previous evidence of the extensive demands on the faculty-clinician's time, usually leads to the result that research gets "lost in the shuffle." As one respondent phrased it, "Hardship, though, for clinic personnel. May have inadequate 'time' for research, yet research publication is a *must* for promotion to higher ranks. . . . University will not budge on promotion to associate and full professor

without high level research. Clinic staff has no time to do it." And one reply noted, "More research assistance available to 'experimental' personnel!"

Promotional Recognition

The problem of adequate time for research by clinical personnel comes to focus, as this quotation indicates, in the matter of promotional recognition. The questionnaire, attempting to get at this problem, asked,

Does your department and/or the University Committee on Advancement use any means to equate the promotional recognition given departmental staff members assigned to the clinic with that accorded those not so assigned?

To this question the following footnote was appended.

This problem may require a distinction between actual and theoretical basis of promotional recognition; thus clinical staff members may find that their duties prevent their spending sufficient time on research and writing to present a publication list comparable with those of persons not having clinical duties, and in many cases, despite verbal recognition of the importance of "teaching skill and community service," it is the bibliography which actually determines promotions. Other means of promotional recognition might include additional titles or specific provisions in promotional regulations for recognizing the service rendered through the clinic.

The answers to the question seem to reflect very little awareness of the problem on the part of those responsible for promotions:

No difference in promotional policy	10	77%
Some difference or equation attempt	3	23%
No response to question	12	

Two schools reported that clinic duties were considered as evidence of "community service," one that the supervisory nature of the duties was given special consideration. Other reported attempts in the same direction included special tenure considerations and special policies to fit individual cases. Only one school reported that some special policy to handle the situation had been actually set forth in writing.

Quotations from three of the schools responding may be of interest.

1. The bibliography does not determine promotion. Community service is weighed as heavily, if not more heavily, than research and writing. The latter is encouraged in every way possible.

2. Our policy would be *not* to "discriminate" against the "clinician," but to recognize the importance of service and supervision of trainees.

3. If the Director of Clinical Training participates, or is informed of the service load of clinical staff members, it is his responsibility to represent the clinical staff with the Department chairman and to University administration since he is in the best position to judge the intangibles involved. Ideally the clinic staff member should have time available above and beyond his total teaching and staff duties for research, writing and reflection. Because of staff limitations this is ordinarily not possible. Recognition of this should nevertheless be made when bibliographies are considered. In addition to this, time spent in administration should be equated.

From two schools in which training in clinical psychology is closely linked with the medical schools' training program in psychiatry comes evidence of the difference between promotional practices in settings having longer experience in clinical education and those lacking such experience.

1. Since we have overlapping appointments with the Department of Psychiatry, in some cases promotion in the Department of Psychiatry has been more rapid than in the Department of Psychology with the person having differential ranks in the two departments.

2. Both he [another Psychology staff member] and I are on the payroll of the Medical School and our salaries have been a little higher than those generally paid by the College of Liberal Arts.

Desire for Change

Surprisingly enough, despite the numerous indications of dissatisfaction with specific aspects of the problems discussed above, relatively few (25 per cent) of the departments are able to point to particular changes which they desire to make. Three schools each desired to make changes in regard to the organizational structure of their clinic, the teaching load of clinical staff members, the workload ratio of such staff, and the provisions for promotional recognition. One school is interested in changing the facilities for research by clinical staff members. It may be that the lack of readily discoverable remedies for some of the problems revealed may account for this apparent discrepancy between dissatisfaction with present situations and desire for change.

In summary, one might reconstruct the hypothetical "average" university psychological clinic as one which has been in operation about eight years, having about five staff members on a full-time basis and using ten rooms exclusively and five more on a sharing plan. The staff of the clinic consists chiefly of regular psychology department members who are not distinguished from their colleagues ex-

cept in terms of their interests and duties. There is about a fifty-fifty chance that the staff members may have somewhat lighter teaching loads in recognition of their clinic supervisory time, but their course load reduction is not apt to be more than the equivalent of one course. However, most of their teaching is in clinical subjects or courses preparatory to clinical subjects. The typical clinical staff member may sometimes complain that his supervisory time in the clinic is much longer than would be demanded of him for teaching lecture courses considered equivalent in unit values, but he can comfort himself that most of the clinical supervision is with graduate students and that he has only about five students at a time. He may find that extra assistance is available to him, but there is no relief from the grind of administrative committees. And the research ideas which come to him probably get buried beneath the rush of daily responsibilities. This tends to worry him some since the Committee on Academic Promotions is known to be more interested in research and publication than in his service contributions. But he comforts himself that the committee has shown some willingness to consider individual circumstances. And strangely enough, by and large he's not seriously discontented with the situation but probably finds satisfaction in being in the middle of a new and yeasty development in psychology and in American graduate education.

SUMMARY

It appears from the foregoing that the problem of integrating professional training into the traditional

academic framework is far from solved. One impression gained from the survey is that the programs for meeting the situation are presently as numerous as the universities reporting, and that as yet no generally satisfactory pattern applicable to most of the institutions has emerged. The diversity of procedures here reported is perhaps a reflection of inadequate communication among the schools concerning their experiences and procedures. Such inadequacy is a natural product of the rapid developments in the field and the expansion of the clinical training program. Perhaps, however, the time has come when more careful consideration must be given to effective integration of these functions.

University clinics, as indicated, form a substantial part of departmental organizations. They require a considerable budget and a sizable portion of staff time. Yet they have received relatively little attention in the literature. A real need appears to exist for a careful administrative analysis of mission, structure, staffing, and function of these departmental psychological clinics. Within such a total study a more careful analysis should be made of the position of the teaching-supervising-researching-clinician. The mutual interests of departmental and clinic staffs in research, training, and service can thus best be served.

REFERENCE

1. RAIMY, V. C. (Ed.) *Training in clinical psychology*. New York: Prentice-Hall, 1950.

Received February 18, 1952

PROCEEDINGS OF THE TWENTY-FOURTH ANNUAL MEETING OF THE MIDWESTERN PSYCHOLOGICAL ASSOCIATION

DAVID A. GRANT, *Secretary-Treasurer*
University of Wisconsin

THE Midwestern Psychological Association held its 24th annual meeting at the Hotel Cleveland, Cleveland, Ohio, April 25 and 26, 1952. The program was arranged by a committee consisting of Judson S. Brown, Chairman, Julian B. Rotter, and Jay L. Otis. The local arrangements were handled by a committee consisting of Calvin S. Hall (Chairman), George A. Ritz, Alexander J. Darbes, John Holland, Richard Wallen, Mrs. Gladys Friedman, Mrs. Marjorie B. Creelman, Leonard Ronis, and William B. Shimp. Registration totaled 890, and an additional 200 psychologists attended.

The program consisted of 158 papers scheduled in twenty sessions. Major emphasis was on learning, industrial psychology, clinical and projective techniques, social psychology, and sensory-perceptual processes. In addition, there were six symposia: the role of therapy in the training of clinical psychologists; social role in personality dynamics; the effect of military contract research on the field of psychology; personal therapy for clinicians in training; and ethical standards in inter-consultant behavior. The counselor training committee of APA Division 17 met in conjunction with the MPA meeting, and the APA Committee on Subdoctoral Education sponsored an informal conference of representatives from schools granting master's degrees.

The presidential address, given by Donald B. Lindsley of the University of California at Los Angeles, was entitled "Brain Function: Some Neurophysiological and Psychological Aspects." It was attended by about 800 psychologists and guests and was followed by a social hour. The Council meeting endorsed present programming procedures which involve limiting the program to 160 papers and anonymous evaluation of the abstracts. At the annual business meeting, it was recommended that the Council be authorized to contribute \$1,000 to the American Psychological Association Building Fund if the APA chooses to make suitable

use of the money. The business meeting also nominated John L. Finan to serve as Midwestern Psychological Association representative on the AAAS Executive Council for a five-year term.

The annual business meeting adopted unanimously the following statement from the Executive Council: "The Executive Council has examined the implications of membership in the Midwestern Psychological Association in the light of current developments in psychology. It has concluded that the professional problems of psychology are best handled at the national level by the national organization and at the local level by the state organizations. The Midwestern Psychological Association will, therefore, retain its traditional function of encouraging psychology as a science rather than as a profession. This principle will continue to be reflected in the programming procedures and membership standards."

The newly elected officers were: David A. Grant, President; Marion E. Bunch, Executive Council (three years); and Lee J. Cronbach, Secretary-Treasurer (three years). The other members of the Executive Council are Paul E. Meehl and Delos D. Wickens, the president, and the secretary-treasurer, *ex officio*.

In line with the legislation of 1951 which provided that any members who have attained their sixtieth birthday and who have been members for at least five years may apply for life membership in the association, the following members were elected to life membership: E. V. Bowers, H. E. Burt, S. A. Courtis, L. D. Hartson, J. R. Kantor, W. L. Sharp, D. F. Showalter, and D. A. Worcester.

The next annual meeting of the Association will be at the Drake Hotel in Chicago, May 1 and 2, 1953. Professor George Speer of the Illinois Institute of Technology will be chairman for local arrangements. The following 108 APA Fellows and Associates availed themselves of the standing in-

vation to submit their annual dues of \$1.50 to join the MPA:

Altmaier, Carl L., Jr.
 Angelino, Henry
 Arnhoff, Franklyn N.
 Aronov, Bernard M.
 Austrin, Harvey R.
 Bakan, David
 Baughman, E. Earl
 Beecroft, Robert S.
 Berkshire, James R.
 Berry, N. H. Berthelot
 Bilodeau, Ina McD.
 Brayfield, Arthur H.
 Bruce, Earle W.
 Buchwald, Alexander M.
 Brown, Kenneth T.
 Burgess, George G.
 Calden, George
 Callahan, Robert
 Capwell, Dora F.
 Carter, Robert S.
 Checov, Louis
 Clayton, Ruth B.
 Collet, Grace
 Dailey, Charles A.
 Dawson, Robert I.
 DeStephens, W. P.
 Diamond, Irving T.
 Downie, Norville
 Dubin, Samuel S.
 Duras, James E.
 Dysinger, Dale W.
 Eglash, Albert
 Fitzgerald, Don C.
 Fitzwater, M. E.
 Flanagan, John C.
 Freeman, James T.
 Gawain, Gary C. V.
 Goodman, Robert W.
 Goodstein, Leonard D.
 Gordon, Mordecai H.
 Heise, George A.
 Herness, Christina (Mrs.)
 Hirsh, Ira J.
 Hoehn, Arthur J.
 Hoffman, Lyle S.
 Horrocks, Winifred B.
 Hotchkiss, Sanford N.
 Houston, Robert C.
 Humes, John F.
 Jones, Robert S.
 Kopel, David
 Krall, Vita
 Lacey, John I.
 Layton, Wilbur L.
 Leibowitz, Herschel
 Levitt, Eugene E.
 Light, Bernard
 Longley, James L.
 Lundin, William H.
 Lundvall, Ruth M.
 MacNitt, R. D.
 Mann, William A.
 Martire, John G.
 Mason, Harry M.
 Meer, Bernard
 Merenda, Peter F.
 Moeller, George
 Moore, John V.
 Morgan, William J.
 Morrow, William R.
 Morsh, Joseph E.
 Muthard, John E.
 McCraven, Vivian G.
 McFarland, Robert L.
 Newland, T. Ernest
 Noble, Merrill E.
 Odoi, Hiroshi
 Peizer, Sheldon B.
 Porter, J. Richard
 Rathfelder, R. R.
 Rochlin, Isaiah
 Russell, Erwin D.
 Ryden, Einar R.
 Saltz, Eli
 Scarborough, Barron B.
 Seymour, Richard B.
 Sigel, Irving
 Solem, Allen R.
 Spangler, Harry
 Stansbury, P. W.
 Stein, Morris I.
 Stern, George G.
 Sterne, David M.
 Sterne, Spencer B.
 Stevens, Walter
 Sutter, Nancy A.
 Tanner, B. William
 Temmer, Helena W. (Mrs.)
 Thomas, James A.
 Wang, J. D.
 Warman, Roy E.
 Wexler, Samuel
 Whitted, Geraldine
 Wilson, Alice W.
 Wilson, Robert G.
 Winker, James B.
 Woods, Walter A.
 Wyckoff, Lewis B., Jr.

The following 103 applicants were elected to membership in the Association upon recommendation of the Executive Council:

Harvey Adelman
 George Ashman
 Harold Babb
 Eugene H. Barnes
 William F. Battig
 Claire B. Benham
 William R. Biersdorf
 Hava Bonne
 Roy Boyce
 Stewart Briggs
 Everett I. Campbell
 Chester Collins
 Robert F. Corder
 Richard B. Cravens
 Thurlow W. DeCrow
 Carl H. Elliott
 Edward Epstein
 Jos. Facto
 Norman Frisbey
 Martin Funk
 Robert A. Gardner
 Herbert Gerjuoy
 Marvin Goer
 Richard Gray
 Clyde Harden, Jr.
 Francis D. Harding
 Charles O. Hopkins
 J. B. Hughes, II
 Walter Huppenbauer
 William Jaynes
 Paul Jensen
 Lennart C. Johnson
 Rossal J. Johnson
 Stanley Joseph
 George Kent
 Mrs. Donna Barnes Kiepek
 Edwin Klingelhofer
 Ted J. Krein
 Frank M. Lachmann
 Mrs. Mary Leichty
 Robert S. Lincoln
 Ivan Lippitz
 Frank J. Loeffler, Jr.
 James Loomis
 Gerald McClearn
 Jack L. Maatsch
 John C. Maloney
 Virginia Lee Maloney
 Sarnoff Mednick
 Walter Mink
 Mrs. Wanda Mitchell
 George Moeller
 Richard Mohr
 Robert Morin
 Elwyn H. Nagel
 Jack Newberry
 Charles Nystrom
 Harold G. Paulson
 Donald R. Peterson
 Patricia Pierstorff
 Robert Pion
 Robert Procter
 Stanley L. Revesman
 Joseph Reyher
 Harold Winston Richey
 Marty R. Rockway
 Irma Rossman
 Gerald Rubin
 Mrs. Cornelia M. Sabine
 William J. Saunders, Jr.
 Charles Scheips
 Jerome J. Schiller
 Seymour Schpoont
 Edward Schwartz
 Alvin Scodel
 Mrs. Ethel C. Sherman
 Sitaram Singh
 Martha Fay Sisk
 Arnold M. Small
 Orville A. Smith, Jr.
 Paul N. Smith
 Philip R. Smith
 Adrian Solomon
 Boris J. Speroff
 John Starkweather
 Martin Steinberg
 Alfred Steinschneider
 Lowell H. Storms
 Paul E. Strandjord
 Norman E. Stump
 Earl D. Sumner
 Samuel Sutton
 Alma J. Swanson
 Robert A. Swanson
 Richard Thackray
 Robert L. Van de Castle
 Raymond H. Van Zelst
 Edward A. Wade
 Melvin Wallace
 Don Weatherley
 Jack Wiggins, Jr.
 Robert Young
 Charles E. Zeleny

PROGRAM

Animal Learning I

- M. RAY DENNY, *Michigan State College*, Chairman
- ROBERT W. GOODMAN, KENNETH E. MOYER, and MARION E. BUNCH, *Washington University*. Variability and behavior constancy in white rats.
- DELOS D. WICKENS, *Ohio State University*. A test of the canalization hypothesis.
- JOHN T. COCKRELL, *Indiana University*. Operant behavior of white rats in relation to the concentration of a nonnutritive sweet substance used as reinforcement.
- L. BENJAMIN WYCKOFF, JR., *University of Wisconsin*. The role of observing responses in discrimination learning.
- M. E. FITZWATER, *Bowling Green State University*. The relative effect of reinforcement and nonreinforcement in establishing a form discrimination.
- D. E. DOUGLASS, M. U. ENINGER, and P. WILLIS, *Carnegie Institute of Technology*. Delay of non-reward as a variable in brightness discrimination learning.
- M. R. GROVE and M. U. ENINGER, *Carnegie Institute of Technology*. Relative importance of approach and avoidance tendencies in brightness discrimination learning.
- M. U. ENINGER, *Carnegie Institute of Technology*. Role of generalized approach and avoidance tendencies in brightness discrimination learning.
- L. N. SOLOMON and O. H. MOWRER, *University of Illinois*. Contiguity vs. drive reduction in fear conditioning: I. The proximity and abruptness of drive reduction.
- E. G. AIKEN and O. H. MOWRER, *University of Illinois*. Contiguity vs. drive reduction in fear conditioning: II. Time of occurrence of the conditioned stimulus with respect to the unconditioned stimulus.
- A. D. CALVIN and M. E. BITTERMAN, *University of Texas*. Configurational and relational learning in the rat.
- M. E. BITTERMAN, *University of Texas*. Further experiments on relational learning in the rat.

Animal Learning II

- AUSTIN H. RIESEN, *University of Rochester*, Chairman
- R. W. LEARY and H. F. HARLOW, *University of Wisconsin*. Learning without apparent incentive in the rat.
- D. A. GAAL, M. U. ENINGER, and M. R. GROVE, *Carnegie Institute of Technology*. The role of the drive stimulus in anxiety-induced conflict behavior.
- ALEXANDER M. BUCHWALD and LLOYD L. LOVELL, *University of Minnesota*. Secondary stimulus generalization mediated by anxiety.
- ABRAM AMSEL, *Tulane University*. The activating and directive drive properties of nonreward (frustration).
- JACK L. MAATSCH and M. RAY DENNY, *Michigan State College*. The inhibitory after-effects of nonreward and sheer response.
- W. BARBARA BROWN and DELOS D. WICKENS, *Ohio State University*. An experimental investigation of the efficacy of removal of primary and secondary reinforcement during extinction.
- WARREN H. TEICHNER and ELAINE HOLDER, *Wright-Patterson Air Force Base*. Reminiscence as a function of the intertrial interval.
- NISSIM M. LEVY, *University of Missouri*. S* and the concept of secondary inhibition.
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A Problem in International Communication

Recently the writer had the opportunity to get together with a number of psychologists from abroad. Our initial conversations were characterized by their strong statements and opinions about "American psychology" together with little knowledge of the work being done here. It certainly would be inappropriate to generalize from this small sample of individuals, for there are certainly groups abroad that keep abreast of developments anywhere. Nor is it implied that this attitude, the holding of strong views without thorough information, is not to be found among American psychologists. The reason that it appears desirable to report our discussion here is that in our analysis of some of the problems of international psychological communication we seem to have hit on issues which might be worth discussing on a wider basis.

For one thing, we felt that the difficulty in intercommunication is in a large part due to the different role which psychology plays in the United States and abroad. Psychology in Europe is still close to philosophy, and is neither an independent discipline nor are its subdivisions especially marked. In the United States, on the other hand, psychology has become departmentalized to the extent that the individual psychologist has to name his subdivision to be correctly identified. He is an industrial psychologist, a personality theorist, a learning psychologist, a clinician, etc. The effect of this departmentalization is a multitude of special interest groups. Their various journals disseminate information on very specific problems of their own specialty. In order to keep up with American psychology the European psychologist, who is less specialized in his interests, would have to study a multitude of journals, and would have to learn a psychological scientific English to understand such terms as "new look in perception," "latent learning," "nondirective psychotherapy," etc. He is faced with the difficult problem of making a choice between reading a few specialized journals and missing much of American psychology or of being well informed and having little time for anything else. There are efforts in the direction of meeting this problem in such publications as the *Annual Review*, which, after all, is designed to acquaint the special interest psychologist with the more general problems and their investigations in other fields. One also could mention an occasional article in the *American Scientist*, which has as its task inter-science information exchange. But these efforts are perhaps too sporadic to be of value for a continuous acquaintance with the field.

We felt that it might be well worth the effort in terms of mutual stimulation and cooperation to take some special pains to communicate our problems and questions and our efforts at answering them to psychologists abroad in a manner which would make it possible for them to understand our line of thinking more readily. Such an effort, by its very nature, would have to involve many psychologists in this country. It might be conceived, for instance, that the present editors of our journals might each want to contribute one appropriate article to some sort of international journal which might appear either in English or in translations. Such a journal would, not unlike the *Annual Review*, set itself the task of acquainting the reader with the major and more general problems of the field and the reporting of important contributions.

It would be conceivable that the APA or even a federal agency might want to support such a task with the assumption that the financial sacrifice involved in starting such an instrument for the dissemination of scientific psychological information would be in our own interest.

It might be argued that such an attempt, though worth while in conception, should be originated by people who supposedly would profit most, i.e., European psychologists themselves. A different view, however, is not without merit. The advantage of the dissemination of scientific information would never rest with one group, but would benefit the whole psychological family as such. Psychology, being most strongly organized in our country, might be in a better position to take the first step.

We were also aware that in our discussions we considered mainly a one-way dissemination of information, that is a summary of the American contributions for European psychologists. The journal was not thought of as a truly international journal which would include articles from abroad because we thought that it would thus detract from its specific contribution. On the other hand, with an emphasis on mutual stimulation, our own journals might tend to re-examine their policies and accept more articles from abroad.

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What Is Clinical Psychology?

Essentially we are dealing with an abstraction when using the term "clinical psychology." Unfortunately, as with some abstractions, the concept so orders its level as to be much too far removed from its referents.

"Clinical psychology" has become so high an order of abstraction that as a map of the territory it presumes to represent, it is much too inclusive, almost non-exclusive.

In the days prior to World War II few psychologists were either trained or inclined to call themselves clinicians. Some hardy souls did band together in the Section on Clinical Psychology of the American Association for Applied Psychology. Private practice as a clinical psychologist in the 1930's was relatively infrequent. The war with its frantic search for trained psychologists suddenly uncovered a new profession. Interestingly enough, in the early days of World War II there was no MOS number for any kind of psychologist let alone clinical psychologist. In some military stations servicemen assigned to psychological duty were variously classified as social workers, personnel workers, M.A.C.'s, and other cognate categories. Now there are at least four levels of Clinical Psychology duty assignments in the Army and Air Force (1, pp. 187-190):

1. Clinical Psychologist (MOS 2232)
2. Psychological Assistant (MOS 2239)
3. Chief Clinical Psychology Technician (MOS 1289: Grade E-7)
4. Clinical Psychology Technician (MOS 2289: Grades E-5 and E-6).

What do clinical psychologists do that sets them apart? A description of the duties would center about three core words: diagnosis, research, and therapy. Job specifications would be functions of the individuals concerned and/or the nature of the organizations to which they are attached. Perhaps we should paraphrase Boring's operational definition (2) to state: "Clinical psychology is what clinical psychologists do." However, even this could not be adequate since this definition implies circularity. A person with training in clinical psychology may be eligible for membership in almost every division of the American Psychological Association; he may apply for the diploma in two of the three specialty fields of the American Board of Examiners in Professional Psychology (while the third area, industrial, may give hiring-preference to the clinically trained person); at least one psychoanalytic institute will consider training in clinical psychology as acceptable. They may knock on the doors of almost any organization purporting to deal with the problems of human beings with one notable exception—they cannot be elected to membership in the national and local medical associations.

What is this too-inclusive abstraction that can open doors? In a recent membership committee meeting of a state psychological association, applicants from almost every type of educational activity were approved for election to various levels of membership. The rea-

soning that prevailed went something like this: anyone who deals with the problems of human organisms is practicing clinical psychology, the _____ worker deals with a significant problem of a human organism, therefore the _____ practitioner is engaging in a kind of clinical psychology activity and is entitled to membership in this state psychological association. Sound reasoning? Why not? The writer has heard a medical colleague liken clinical psychology, like its parent psychology, to an octopus—always reaching out and grasping, never letting go of what its tentacles have encircled. It would appear that the scope of clinical psychology is limited only by those who want to call themselves clinical psychologists and whose ex post facto accumulation of activities soon falls within the purview of clinical psychology. Here, then, is the circularity of our professional horizon. Boring's paraphrased definition must be rephrased: "Clinical psychology is what anyone who wants to call himself a clinical psychologist does." And herein lies the weakness of our professional status and acceptance.

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"Psychological Writing, Easy and Hard for Whom?" Further Comment on the "Peak Stress" Method

In their brief report in the June 1952 *American Psychologist*, Dearborn, Johnston, and Carmichael present some tentative findings on the "peak stress" method of measuring readability. They measured the degree of agreement between two subjects who were asked to select the *one* word in each sentence read which they would stress most were they to read that sentence aloud. Applied to five books previously tested by the Flesch readability formula, this new method resulted in a rank order of readability strikingly different from that produced by the Flesch scores. Two psychology texts by Allport and Boring, Langfield, and Weld showed highest agreement on "peak stress" but rated comparatively low in readability by the Flesch score; on the other hand, *Psychology for the Fighting Man* by Boring and Van de Water, a skillful popularization, gave an excellent Flesch readability score, but produced only moderate agreement on "peak stress."

Dearborn, Johnston, and Carmichael interpret this discrepancy as an indication of certain aspects of read-

ability not covered by the Flesch formula. "For college majors in psychology . . .," they comment, "longer sentences of more complicated structure and longer words with prefixes and suffixes may result in more comprehension per unit of time for the very reason that the longer sentences, words, and ideas yield on the average greater precision as to meaning than do the simpler modes of expression."

This inference does not seem to be warranted by the data. Let me briefly present another hypothesis that would account for them without attributing high readability to an academic, formal, or elaborate style:

It appears to be true that greatest agreement among subjects as to "peak stress" will be found in straight expository material, such as standard textbooks, research reports, scientific papers, etc. Prose of this sort is usually composed entirely of declarative sentences, following each other in simple, logical sequence; the tone is even and flat, the style is deliberately unemphatic, the writer keeps himself far in the background. I take as a random example the following paragraph from page 179 of the June issue of the *American Psychologist*:

The type and amount of practicum experience needed by a given student depend on the types and amounts of experience which the student has already had. In most cases, the counseling psychologist will need to develop practical competence by means of a planned sequence of supervised laboratory courses, field work, and an internship. In cases where the department and the student decide that certain competencies have already been acquired by the student, the practicum phase of training can be shortened accordingly.

This sort of passage may well result in considerable agreement on putting "peak stress" on *had* in the first sentence, *most* in the second, and *already* in the third. In other words, the standard academic style gives only a limited degree of freedom with regard to "peak stress."

The informal, popular style, on the other hand, is more personal, more spontaneous in its movement; it involves the reader more and therefore gives him more freedom to choose his personal interpretation, tone, and emphasis. There may therefore be considerably less agreement on "peak stress" among readers, but the average comprehension—and readability—would nevertheless still be greater than that of standard academic reading matter.

Although Dearborn, Johnston, and Carmichael have doubtless contributed a thought-provoking set of facts, the use of their "peak stress" method as a measure of readability seems highly problematical.

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New York University

Reply to Super's Letter

This is in reply to Donald Super's letter (*Amer. Psychologist*, May, 1952) requesting a definition of the concept of fellowship in APA. As a member of the APA for twenty years, I believe both Associateship and Fellowship, and even Affiliate membership, to be a matter of both (a) a given level of professional achievement and (b) personal integrity.

Now both professional status and integrity may change in the course of time. When status changes, one may advance in accordance with certain constitutional provisions to a higher level of membership. When personal integrity shows signs of change, the Committee on Scientific and Professional Ethics and Conduct is expected to act for the APA. This, I believe, applies to Affiliates, Associates, and Fellows alike.

I do not favor Super's assumption that APA Fellowships are bound by a special code of ethics. If a member's ethics are proved to be below the level of a psychologist, he should be dropped by the APA regardless of whether he is an Affiliate, an Associate, or a Fellow.

To facilitate smooth transfer from one level of membership to another, however, I should suggest that the secretary of each APA division clear transfer applications with the Committee on Scientific and Professional Ethics and Conduct before submitting an applicant's name for a final vote of the division's membership, and certainly before recommending the applicant to the APA Council. Such a procedure may obviate the unpleasantness which Dr. Super has experienced.

MAURICE H. KROUT
Chicago Psychological Institute

Conformism in Contemporary Psychology

This is an era, as Justice William O. Douglas is pointing out in his current pamphlet "The Black Silence of Fear," in which we are developing tolerance only for the orthodox point of view, intolerance for new or different approaches. And orthodoxy has always stood in the path of change; it has been the stronghold of the *status quo*, the enemy of new ideas—especially new ideas that are disturbing to the standardized point of view. Justice Douglas is speaking mostly from a political and world affairs frame of reference, but do these remarks perhaps apply with equal potency to contemporary academic psychology?

It seems certain, as borne out in this column in the June issue, that only the orthodox point of view is tolerated in Stalinist Russia, be it in psychology or in politics. In fact, the very nature of the political state has rested on certain, if discontinuous, psychological assumptions. In his recent book *The New Man in Soviet Psychology*, Raymond A. Bauer shows the shifts

that have come about since the Twenties in "official" Soviet psychology—from reflexive mechanism, to conscious voluntarism, to extreme environmentalism, and back again to a modified State-centered voluntarism. All sciences have now become thoroughly "politicalized" and the State has most recently dictated a "return to correct Pavlovian principles," emphasizing especially Pavlov's somewhat obscure "second signal system."

I say, as has been said so many times, that the only basis for creative human inquiry, in any area, is *freedom*—freedom from constraint, freedom from coercion, freedom from indoctrination, freedom from dictation on the part of the State, on the part of the majority, or on the part of the leaders of a profession. Tolerance for the minority opinion or for the personal pursuit is the test not only of a free society but of a free science.

Psychologists have felt the political "squeeze," especially in the California and Ohio State incidents. But do those who speak for "academic freedom," or for freedom from "external" control over science, really themselves practice *within the profession* the kind of tolerance that they advocate? That is, how much real tolerance for opposing points of view is there to be found right now in the graduate schools of psychology in this country? How many really new ideas do we allow ourselves to have in the profession? How much genuine challenging and criticizing of our orthodox points of view do we allow to go on?

I say that it is as dangerous for the leaders of a profession to dictate to the new generation of scientists as it is for the leaders of the State to hand out the "Truth." Yet some of our "youngsters" get the unmistakable impression that it is often "conformism" and not "creativity" that is rewarded in contemporary academic psychology. Do our graduate schools, and the professional journals for that matter, attempt to build an on-going, creative science that continually seeks the "really new" at the periphery of knowledge? Or are we more concerned with reiterating and propagating the doctrinaire conceptions and value preferences held by some who dominate the present profession?

How many psychologists actually exhibit in daily, personal behavior a genuine interest in academic freedom, scientific progress, and professional tolerance?

ALFRED KUENZLI
Bloomington, Indiana

Further Information on Service Programs of Psychological Research

Since publication of my article on "Organization and Opportunities in Service Programs of Psychological Research" in the May issue of the *American Psychologist*,

a number of inaccuracies and omissions have been called to my attention by various Defense offices. Although the article contained obvious Air Force biases, it was not my intention to slight other service programs or to distort facts. I hope that the following additions, deletions, and corrections will be accepted by all concerned as a righting of these errors.

The Office of the Surgeon General, Department of the Army, conducts programs in experimental, physiological, and clinical psychology, and human engineering. Special attention should be called to the programs of the Psychology Branch, Army Medical Research Laboratory, Fort Knox, Kentucky, and of the Psychology Division, Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington, D. C. At both of these installations, there are position vacancies in research positions and, in both units, qualified officers are assigned.

An individual inducted through Selective Service procedures will probably have no option about the branch of service to which he will be assigned if he enters the Army. Individuals who are about to be inducted *should not* write to military research agencies requesting preferential assignment since such requests will not at all affect assignment. The services attempt to assign each individual to that job for which he is best qualified within limitations imposed by service needs.

My statement "at present, there is almost no chance that a male non-clinical psychologist can be given a direct commission in any of the military services" should be qualified. Certainly, there is a continuing need for officers qualified in clinical, experimental, social, and other psychological specialties in Army, Navy, and Air Force. Exhausted quotas and freezes are characteristically temporary. The quoted statement certainly was inaccurate in relation to Medical Service Corps wherein there were numerous openings for individuals who hold the doctorate degree in clinical or research psychology.

I stated "women psychologists stand a much better chance of being awarded direct commissions in the WAF, WAC, or WAVES." I should have added "but not necessarily as psychologists per se."

My references to the date of the pre-induction physical (p. 153) should now be changed to "anticipated date of induction."

For civilian employees, sick leave accumulates at the rate of 13 days per year (no limit on accumulation). Annual leave accumulates at the rate of 13 days per year for employees with less than three years of service, 20 days leave for those with three to 15 years, and 26 days for those with over 15 years. Years of service are combined military and civilian service.

I am indebted to Lt. Col. Frederick A. Zehrer, Chief, Clinical Psychology Branch, Psychiatry and Neurology

Consultants Division, Office of the Surgeon General, Department of the Army, and to Doctor Ralph R. Canter, Psychologist, Directorate of Training, Personnel Procurement Division, Department of the Air Force, for calling the above to my attention.

GLEN FINCH
Washington, D. C.

Clarification of the Mark Twain Quotation in "No Comment Necessary!"

As a result of some correspondence, occasioned by the translation of Gulia's article, "No Comment Necessary!" (*Amer. Psychologist*, June, 1952), it seems the Russian journalist did base his version of the introductory Mark Twain tale on something more substantial than pure fantasy. On page 156 of *Mark Twain in Eruption* in the chapter *Two Halos*, there appear in order the following lines: (A) "I only thought of ways and means to remove my respectability from that tainted atmosphere"; (B) "And I said then it [the Board of Directors] ought to stop opening its meetings with prayer—particularly when it was getting ready to swindle an author." Apart from Gulia's distortions of setting and language, in Gulia's version not only does (B) precede (A), but (B) and (A) are put in a direct causal sequence which does not reflect the original. In other words, while there is "fabrication," it is not "pure and simple" as my footnote 1 of "No Comment Necessary!" would state. The title, *My Publishers*, was probably a substitute title for the original chapter title, *Two Halos*, in that particular Russian edition of the Mark Twain work which Gulia may have used. The counterpart of (A) in the Gulia version may also be similarly explained.

IVAN D. LONDON
Brooklyn College

A Psychological Museum

It has repeatedly occurred to me that scientific and professional psychology could profit from the establishment of a Psychological Museum (and Archives) which would house apparatus of historical interest, autographed letters, manuscripts, rare books, photographs, and other similar materials. In these days of rapid historical change for psychology and while some of the older makers of psychological history are still with us, the idea is particularly timely. The purchase of a commodious building by the APA lends practicability to the proposal since, presumably, this edifice will have more than enough room for present APA purposes and could readily provide space for such a museum.

The value of the proposed institution for history, research, and teaching as well as for public education

would be inestimable. The last-named function would be well served in the Washington location. In due time, perhaps with the help of special exhibits, the public might thus acquire a better understanding of what psychology is and has to offer. The advantages to the historian and to the serious student of psychology are self-evident.

Such a venture could start on a modest scale under the auspices of the APA and the guidance of a representative committee from its membership. Many university laboratories have on an attic floor or in dark closets pieces of apparatus that are fast becoming obsolete if they are not already nameless. I personally recall such potential troves in at least five universities. Another source would be the private collections of individual psychologists who might be willing to give or bequeath materials of historical value.

Expenses for maintenance, including the salary of a curator who might eventually be needed, ought reasonably to be found from APA income; or, as an alternative, some philanthropic foundation might be willing to support such an undertaking, temporarily or indefinitely.

At a time when so much is being done to promote psychology for present and future needs, the establishment of the proposed Psychological Museum and Archives would provide a stabilizing influence from the historic past.

Do others share the views herein expressed and do they perhaps have additional suggestions in the furtherance of the proposal?

HISTOROPHILE¹

Constructive Opposition and the Voice of the Minority

The writer proposes that when a law or political action is opposed by the APA or local psychological groups, the statement of opposition should be combined with the suggested solution of the problem at hand supported by the majority of the groups. If majority support cannot be obtained for some action regarding the problem, that fact should be made known. For example, if a special loyalty oath is opposed, then the traditional oath, or no oath, or some other alternative should be positively supported in the same action. Simply to oppose is not to be constructive, and is all too likely to involve some hidden or neurotic purpose.

I would also argue that any such resolution should carry with it an account of the votes for and against the action, and the number of members not expressing

¹ The *American Psychologist* does not ordinarily publish anonymous contributions. We have here made an exception to this policy because the writer felt that it would be preferable to have his proposal suggested by a "psychologist in the abstract—an impersonal representative of historical psychology in general."—Ed.

an opinion. I have been told that this would be a poor procedure, since the "effect" would be lessened. It is difficult to see how the objector could mean anything other than the propaganda effect. One is impressed that persuasion here involves hiding facts, refusing to present all the relevant data at hand. As scientists, and speaking under the label of a scientific organization, this seems a singularly inappropriate procedure.

This letter is prompted by events at the 1952 Western Psychological Association meeting and the 1952 California State Psychological Association meeting. At the WPA meeting, the following resolution was adopted:

Believing that political tests and conformity oaths are an infringement on the traditional American rights of academic freedom; that by limiting and rigidly moulding thought and inquiry such oaths hamper scientific progress, we, the members of (the) Western Psychological Association, in convention at Fresno, California on April 25, 1952, declare ourselves in opposition to the enactment of the Assembly Constitutional Amendments, Numbers 1 and 9, to the California State Constitution.

One might conclude that a vote for the resolution is a vote for the *status quo*. If this is the case, we are responsible for making this explicit. If this is not the case, the resolution is ambiguous. It is my belief that our first responsibility is to be as clear as we can be about what we are in favor of and secondly to try to persuade others to take our point of view.

The vote on the resolution was to be reported with the report of the action taken in the WPA meeting. In the CSPA meeting, the same resolution was, in effect, passed. This time, it was voted that the number of votes for and against should *not* be reported. The majority deprived the minority of the right of a minority report. Disregarding the question of the legality of this action under the by-laws of the CSPA, I must lament this development. Here is a clear instance of a majority, supposedly "liberal" in point of view, insisting that a conclusion be presented without appropriate clarifying data, an instance of perversion of rule by majority vote.

What kind of madness is this which impels some of us to oppose without taking a positive stand on some solution or denying explicitly the existence of the supposed problem; and to object to a loyalty oath as oppressive and in the same breath to vote oppressively to gag a substantial minority?

C. L. WINDER
Stanford University

Presidential Choice and Performance on a Scale of Authoritarianism

Considerable interest has been shown recently in the F Scale, a test which attempts to measure the strength

of "authoritarian" or "antidemocratic" attitudes in individuals. It was constructed by Adorno, Frenkel-Brunswick, Levinson, and Sanford, and is described in their book *The Authoritarian Personality* (1). The F Scale will not be described further herein. Suffice it to say that the higher the score, presumably the greater the extent of "authoritarian" attitudes.

The hypothesis was conceived that individuals who preferred MacArthur for President of the United States would obtain higher scores on the F Scale, on the average, than those who preferred other presidential aspirants. In order to test this and other allied hypotheses, the present study was executed immediately after the keynote address by General MacArthur to the Republican National Convention. Haste was necessary in order to avoid any changes in attitude toward the various aspirants that might result from later actions of the Convention. The data were collected prior to the balloting on the contested Georgia delegates.

The F Scale was administered to 390 students, freshmen through graduate, in classes in chemistry, education, law, psychology, and sociology at the University of Tennessee. After all students in each class had completed the F Scale, the following directions were read: "Write at the top of the page the name of the one man of the following six you would most prefer as President of the United States." The following names were then written on the blackboard: Eisenhower, Kefauver, MacArthur, Russell, Stevenson, Taft (the order of presentation of the names varied from class to class).

The number of students who chose each candidate, their mean F Scale score, and the standard deviations are as follows:

Aspirant	Number Choosing	F Scale Mean Score	SD
Taft	56	4.18	.77
MacArthur	36	4.15	.84
Russell	16	3.86	.87
Kefauver	101	3.71	.79
Eisenhower	158	3.67	.79
Stevenson	23	3.09	1.03

Analysis of variance yielded the following results:

Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	41.54	5	8.308	13.37
Within Groups	238.48	384	.621	
Total	280.02	389		

Although Bartlett's test for homogeneity of variance (2) resulted in a χ^2 of 18.517 (1% value is 15.086), the obtained *F* value of 13.37 is so far beyond the 1% value (3.07) that we can safely conclude there are real differences between the means despite the existence of real differences between the variances.

Since the original hypothesis (that those who preferred MacArthur would have higher F Scale scores than those who preferred other candidates) antedated the data, the t test was employed to test it, as follows:

Aspirant	Number Choosing	F Scale Mean Score	SD	Difference	t
MacArthur	36	4.15	.84	.43	3.07
All Others	354	3.72	.83		

With 388 degrees of freedom, the appropriate one-tailed probability may be obtained approximately from a table of the normal distribution, which yields the value .0011. Though this value is a little too low, the difference is clearly significant at close to the one-in-a-thousand level.

In order to test similar hypotheses concerning other candidates, the upper and lower 25% of the F Scale scores were separated from the middle 50%, and the hypothesis of zero association between choice or non-choice of each candidate and membership in the high or low group was tested by means of chi square, using the Yates correction. The results are as follows:

FREQUENCY OF CHOICE

Candidate	Highest 25%	Lowest 25%	χ^2	Significance Level
Taft	23	8	9.81	$p < 1\%$
MacArthur	14	5	5.83	$1\% < p < 2\%$
Russell	5	3		
Kefauver	22	25		
Eisenhower	31	43	4.78	$2\% < p < 5\%$
Stevenson	3	14	6.44	$1\% < p < 2\%$

Since these are two-sided tests, and this technique is less efficient than the t test, the value for General MacArthur is much less significant than it was in the previous comparison. The results of chi square for the other candidates are especially interesting.

A crude study of the relation between the "authoritarianism" of aspirants and of those who chose these individuals was made by asking 18 people—members of the faculty in law, sociology and psychology, and advanced graduate students of psychology—to rank the

eight men for "authoritarianism." The results are as follows:

Aspirant	F Scale Mean Score	F Scale Rank Order	Mean Judged Rank for Authoritarianism	Rank Order for Authoritarianism
Taft	4.18	1	2.2	2.0
MacArthur	4.15	2	1.2	1.0
Russell	3.86	3	3.8	4.0
Kefauver	3.71	4	5.1	5.5
Eisenhower	3.67	5	3.4	3.0
Stevenson	3.09	6	5.1	5.5

The rank correlation is .73; inasmuch as it is based on only six cases it is, of course, quite unreliable.

CONCLUSIONS

1. In a group of 390 students at the University of Tennessee, significant differences in F Scale scores were found among those favoring different men for President of the United States.

2. Those favoring MacArthur had significantly higher F Scale scores than those favoring other candidates.

3. A significant number of those favoring Taft and MacArthur were in the upper 25% of F Scale scores.

4. A significant number of those favoring Eisenhower and Stevenson were in the lower 25% of F Scale scores.

5. There is some evidence of a positive correlation between the mean F Scale scores of students who favor particular candidates and the judged "authoritarianism" of the aspirants.

6. These data must be interpreted with caution. They seem to be evidence, however, for a speculation that has been offered by many individuals, i.e., voting behavior is influenced, partially, by certain personality attributes of both the voter and the candidate.

REFERENCES

1. ADORNO, T. W., *et al.* *The authoritarian personality*. New York: Harper, 1950.
2. EDWARDS, A. L. *Experimental design in psychological research*. New York: Rinehart, 1950.

OHMER MILTON
University of Tennessee

Psychological Notes and News

F. C. Bartlett, professor of psychology and director of the Psychological Laboratory at Cambridge University and Fellow of St. Johns College, Cambridge, retired at the end of the academic year 1951-52. He is succeeded as director of the Psychological Laboratory at Cambridge by O. L. Zangwill, who has been director of the Institute of Psychology at Oxford University.

George F. J. Lehner has been awarded a Fulbright Fellowship for the year 1952-53 to do research at the University of Vienna on the Viennese influences on modern clinical psychology. John P. Seward has been granted a sabbatical leave of absence from the University of California for the year 1952-53. He plans to spend the period in study and research.

Starke R. Hathaway will be acting professor in the department of psychology at Stanford University during the coming year. He will be teaching clinical psychology and will also be on a research appointment in the Thomas Welton Stanford Psychic Research Fellowship.

Marvin L. Aronson has been accepted by the Postgraduate Center for Psychotherapy of New York as a staff member in the status of Fellow in Psychotherapy. He was formerly with the New York Regional Office of the Veterans Administration.

Julian C. Stanley, associate professor of educational psychology at George Peabody College for Teachers since June of 1949, has been appointed associate professor of education at the University of Wisconsin, effective in June of 1953. Currently he is president of the Tennessee Psychological Association, chairman of the psychology section of the Tennessee Academy of Science, trustee of Test Research Service, and research adviser to the American Institute for Research.

William M. Lepley, professor of psychology at the Pennsylvania State College, has been named director of the psychological laboratories. William U. Snyder has been raised to the rank of professor of psychology at this institution; and Ila

H. Gehman and Joseph H. Grosslight have been promoted to associate professorships.

Elden A. Bond, formerly director of the Health and Guidance Center, Spokane, Washington Public Schools, has been appointed Assistant Superintendent of Schools, Milwaukee, Wisconsin in charge of guidance, counseling, and special education.

Lawrence T. Dayhaw has resigned as professor of psychology at the University of Ottawa to accept the position of director of personnel with the Stowell Screw Company in Longueuil, Quebec.

C. E. Hamilton, formerly at Montana State University, is now associate professor and chairman of the department at Alfred University, Alfred, New York. Harold P. VanCott is assistant professor in the same department.

Marianne L. Simmel has joined the staff of the Illinois State Psychopathic Institute as psychophysiological and assistant director. She will continue as assistant professor of psychology in the department of psychiatry, College of Medicine, University of Illinois.

The Iowa Child Welfare Research Station, State University of Iowa, has added the following staff members for the coming academic year: Alfred Castaneda, formerly of the psychology department of the Ohio State University, as assistant professor of preventive psychiatry; Herbert Greenberg, from the psychology department of the University of Chicago, as assistant professor of preschool education; Irene Harms, from the Institute of Special Services for Children of the University of Illinois, as assistant professor of experimental child psychology; William Lampard, from the Institute of Adult Education at Teachers College, Columbia, as assistant professor of parent education; Eugene E. Levitt, formerly in private practice in Cleveland, Ohio, as research assistant professor in preventive psychiatry; Howard V. Meredith, from the University of Oregon, as professor of research methods and physical growth; Charles C. Spiker, visiting assistant professor during the past year, remains on the staff as assistant professor of experimental and child psychology; and Seymour Zelen, from the

University of California, Los Angeles, has joined the staff as research assistant professor of preventive psychiatry. He replaces Ruth Tasch, who is joining the staff of the University of Connecticut; and Dr. Levitt replaces Dorothea Smith, who has joined the psychological staff of the Receiving Hospital of the Ohio State University. The other senior staff members are: Orvis C. Irwin, professor of child psychology; Boyd McCandless, research professor and director; Ralph Ojemann, professor of child psychology and parent education; Afton Smith, assistant professor of parent education; Ruth Updegraff, professor of preschool education, and May P. Youtz, associate professor emeritus (one-third time) of parent education.

Marie Jahoda was awarded the Civil Liberties Research Award of the Society for the Psychological Study of Social Issues at the last APA meeting. The award was made for a projected study of the impact of loyalty and security measures on federal employees. The study will be made at the Research Center for Human Relations at New York University.

Katherine E. Baker has left Connecticut College to take an assistant professorship in the department of psychology, University of Nebraska in Lincoln, Nebraska.

James Monroe Lanmon, formerly lecturer in educational psychology at the University of Texas, is now associate professor of psychology at Mississippi College, Clinton, Mississippi.

Leonard V. Wendland has been appointed clinical psychologist for the Respiratory Center for Poliomyelitis at the Rancho Los Amigos, Hondo, California.

Henry H. Morgan, formerly a research associate at Wesleyan University, has been appointed assistant director of the Psychological Service Center of the Psychological Corporation.

Anita F. Lyons, director of special education of the Leonia School, New Jersey, and chief psychologist of Grace Church School, New York, has been appointed a part-time lecturer in the department of psychology at Adelphi College.

George E. Passey and B. G. Rosenberg joined the staff of the department of psychology at the

University of Alabama in September, both at the rank of assistant professor.

Walter G. Klopfer, formerly of Duke University, is now chief psychologist at the Norfolk (Nebraska) State Hospital. Willard Rogers has been appointed as psychologist, and Dorothy Ackerman and Alleen Vinyard as psychological interns.

Harold V. Gaskill is the new chairman of the NRC Committee on Highway Safety Research. He replaces Ernest R. Hilgard.

At Columbia University, Conrad G. Mueller and William N. Schoenfeld have been promoted from assistant to associate professorships. Henry E. Garrett taught in the summer session at the University of Hawaii. Fred S. Keller represented the university as an observer on the summer training cruise of the Naval Reserve Officers' Training Corps. Clarence H. Graham has conducted seminars in experimental psychology of vision at the University of Kyoto, Japan. These seminars are part of a project financed by the Rockefeller Foundation.

The University of Maryland has announced its faculty changes. The full-time members of the department of psychology now are: T. G. Andrews, professor and head; Charles N. Cofer, professor; Ray C. Hackman, professor; J. W. Sprowls, professor; John W. Gustad, associate professor and director of the university counseling center; Arthur W. Ayers, associate professor of industrial psychology; Sherman Ross, associate professor; Roy K. Heintz, assistant professor; Elliott M. McGinnies, assistant professor; Norman M. Paris and Janice P. Fish, members of staff of the university counseling center. In addition there are several part-time faculty members teaching for the department in off-campus military installations including several places in Europe, as well as several graduate and research assistants assigned to departmental and contractual research. Frances O. Triggs is no longer associated with the department of psychology or the university counseling center. The department offers training through the doctoral level in the following areas of specialization: industrial, social, and quantitative psychology, human engineering, and counseling.

The Court Intake Project of the New York City Court of Domestic Relations has made the following appointments to its research and clinical staff: Mollie R. Harrower, director of research; Joseph B. Margolin, research consultant (group dynamics); Melvin Roman, research consultant (reading therapy); Carmi Harari, research psychologist; Samuel Mintz, research psychologist. The staff also includes several psychiatrists and social workers. The Court is engaged in investigating the social, psychological, and educational aspects of delinquency.

The University of Illinois has established an Institute for Research on Exceptional Children, and has appointed Samuel A. Kirk as director. The purpose of the Institute is to extend research on children who deviate physically, mentally, and socially, and to provide opportunity for advanced graduate studies in psychological, educational, and sociological problems of exceptional children. Graduate assistantships for qualified students have been made available.

The Student Counseling Bureau, University of Minnesota, is sponsoring a conference on the counseling of science and engineering students. This conference will be held November 10, 11, and 12. Those interested in further information about the conference should write Dr. W. L. Layton, Assistant Director, Student Counseling Bureau, 101 Eddy Hall, University of Minnesota, Minneapolis 14, Minnesota.

At the last APA meeting a group of psychologists interested in the physically impaired formed a National Council on the Psychological Aspects of Physical Disability. The following were selected to serve as a temporary executive committee: Phyllis F. Bartelme (secretary-treasurer), George Cohen, Tamara Dembo, James F. Garrett (chairman), Stanley Gochman, Edna S. Levine, George Meyer, Lee Meyerson, T. Ernest Newland, Nathaniel Raskin, Herbert Rusalem, Robert S. Walldrop, and Frederick A. Whitehouse. Efforts will be made to keep psychologists specializing in this field in touch with current activities through an information program. Psychologists interested in further details are invited to contact Dr. Bartelme at the National Society for Crippled Children and Adults, 129 East 52nd Street, New York 22, New York.

Syracuse University has announced the establishment of a new all-university department of psychology and Psychological Research Center. The establishment of this new all-university department of Syracuse marks the culmination of long aspirations among Syracuse psychologists. Previously, psychological programs and services had developed independently in several different administrative units of the University: the College of Liberal Arts, the School of Education, the Maxwell Graduate School of Citizenship and Public Affairs, the College of Business Administration, the Psychological Service Center. In the administrative structure of the University, the new department is located in the College of Liberal Arts.

The Psychological Services Center and the Evaluation Service Center are combined under the new title of Psychological Research Center. The revised title is indicative of the new stress on research in the department. Administratively, the Research Center is part of the department, with the chairman of the department also Director of the Research Center. The following service and research enterprises which have previously been performed in the Psychological Services Center and the Evaluation Service Center will be combined in the Psychological Research Center: testing; counseling, reading clinic; personnel research; evaluation studies; studies for business and industry; training and instructional research; and a variety of projects sponsored by government and private sources.

Members of the strengthened and unified department of psychology are as follows: C. Robert Pace, chairman; Raymond G. Kuhlen; George G. Thompson; Harry W. Hepner; Roland C. McKee; Wesley R. Wells; Arthur W. Combs; Chalmers L. Stacey; Ernst G. Beier; Marvin J. Herbert; Floyd H. Allport (member from the Maxwell School); Eric F. Gardner (member from the School of Education); Charles R. Langmuir (member from the School of Education); William Cruickshank (member from the School of Education); Claude W. Grant (dual member, School of Education and the Research Center); William D. Sheldon (dual member, School of Education and the Research Center). The organization also includes four instructors, one lecturer, the head of the testing service, a secretarial and clerical staff of six, and fourteen graduate assistants.

Headquarters of the department are in two adjacent buildings on the Syracuse campus, and may be addressed as follows: Syracuse University, Department of Psychology, 123-125 College Place, Syracuse 10, New York.

The American Psychosomatic Society will hold its tenth annual meeting at Chalfonte-Haddon Hall, in Atlantic City, on Saturday and Sunday, May 2 and 3, 1953. The Program Committee would like to receive titles and abstracts of papers for consideration for the program by December 1, 1952. The time allotted for the reading of each paper will be twenty minutes. Papers accepted for presentation at the meeting will be submitted to the Editorial Board of *Psychosomatic Medicine* for possible publication in the journal. Material for consideration by the program committee should be sent, in duplicate, to Dr. Sydney G. Margolin, Chairman, 551 Madison Avenue, New York 22, New York.

Social Science Research Council fellowships and grants for 1953. The SSRC offers two types of fellowships and grants: (a) Those designed exclusively to further the training of research workers in social science. These include the Research Training Fellowships and the Area Research Fellowships. These fellowships provide full maintenance. (b) Those designed to aid scholars of established competence in the execution of their research, namely, the Travel Grants for Area Research, Grants-in-Aid of Research, and Faculty Research Fellowships. These awards do not provide full maintenance and are not available to students working for degrees. For further information and application blanks, write to the Social Science Research Council, 726 Jackson Place N. W., Washington 6, D. C. Inquiries should indicate age, academic status, vocational aims, nature of the proposed training or research, and type of assistance desired. Final applications, on forms provided by the Council, must be filed not later than January 5, 1953.

Moratorium declared. By vote of the Board of Directors and the Council of Representatives, the procedures have been changed for applicants desiring Associate membership in the APA. It will take about two months to work out the administrative details and develop the necessary forms. In the meantime, all APA members are asked to refrain from endorsing any applications, and not to hand out copies of application forms they may now have. Only the procedures have changed; membership requirements are still the same. The deadline will be August 1, 1953 for the next consideration of applications. We will let you know via the *American Psychologist* when the moratorium is over, and supplies of the new forms will be mailed during November to universities and employers of large numbers of psychologists.

1953 APA dues. At its September 1952 meeting, the Council of Representatives voted that APA dues, for both Fellows and Associates, shall be \$17.50 per year, with a reduction of \$5.00 per year for those who have been members for less than five years. This increase was made necessary by the steadily rising expenses of those APA publications which are sent to all members, and by the fact that the Association's general activities have been increasing both in complexity and cost.

Though financial necessity was the prime determiner of the Council's action, the form of the action was dictated by two principles: (a) that those who have been members for five years or more and are relatively well established as psychologists can and should give more support than younger members to the Association's activities, and (b) since Associates have every essential membership privilege enjoyed by Fellows, the practice of charging Associates lower dues than Fellows does not make much sense. A dues differential based on the number of years of membership seems more equitable.

Convention Calendar

AMERICAN PSYCHOLOGICAL ASSOCIATION

September 4-9, 1953; Michigan State College

For information write to:

Dr. Fillmore H. Sanford
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J. McV. HUNT

Professor of Psychology, University of Illinois
President of the American Psychological Association, 1952

PSYCHOLOGICAL SERVICES IN THE TACTICS OF PSYCHOLOGICAL SCIENCE¹

J. McV. HUNT

University of Illinois

TWENTY years ago last spring on my qualifying examination, Professor Madison Bentley asked me to discuss any relationships I might find between clinical and experimental psychology.² Undoubtedly this question was tailor-made for my interests. I have forgotten my answer except in so far as it affirmed an interdependent relationship between these two aspects of psychology. Tonight, after spending 15 years of my professional life with one foot in the clinic and the other in the laboratory and five other years as the research director of a social agency, where the research and much of the service given was not unrelated to psychology, I should like to return to this question. Perhaps I shall only be illustrating the principle that one's prejudices are persistent, but I wish to say again that, at least at this stage of our history, psychological science and psychological service, or more broadly, psychological technology, are interrelated and interdependent, and the advance of each depends upon its close association with the other. I shall be especially concerned with the role of psychological services and social organization in the tactics of advancing science especially in areas of personality and social psychology.

This topic appears to me to have a certain timelessness deriving from the current ambivalence of our culture toward science. While science, and psychology included, is receiving greater support from society than at any time in history, some men call for a moratorium on science because the social problems created by the power deriving from physi-

cal science appear threatening. A popular critic (79) refers to sciences as "a sacred cow" with the approbation of a large share of newspaper critics. Other men write of the behavioral and social sciences as over-extensions of the scientific method into fields where they have no place, and many of these same men appeal to the intellectual giants and convictions of the past as guides to practical personal and social action. "Among the questions on which learned and sincere men now disagree," writes Conant, "[is] the following: Is there such a thing as a scientific method of wide applicability in the solution of social problems" (15, p. 7)? In such a setting, it seems fitting to examine our resources and our possibilities.

Another ambivalence shows within our own ranks. Although we psychologists have united profession and science in our Association, all is not comfortable. Boring (8) has referred to this Association, not without approval, as a two-headed organism, and Wolffe (87) has used the metaphor of the circus rider on two horses. I believe the unity of profession and science is highly functional and I should like in this discussion to foster that unity. Even in the physical sciences, where the extensive development of theory tends to remove the "pure" scientist from practical problems, and, by virtue of this, one can speak truly of "applied" science, the scientist and the inventor—applied scientist—have become friendly colleagues (15, 55). The schism between "pure" and "applied," which was wide and deep during the 19th century, is probably a habit of thought remaining from the ancient Greek tradition. Pythagoras and his followers, as Crowther writes, once "claimed as their chief glory that they had raised arithmetic above the needs of merchants" (17, p. 55). At our stage of development, I believe most of psychological science can be favorably influenced by either direct or indirect concern with practical human problems, and this appears to me to be especially true in the areas of personality and social psychology.

¹ Address of the President of the American Psychological Association, Washington, D. C., September 1, 1952.

² It is to Professor Madison Bentley and to Professor J. P. Guilford that I owe my start in psychology. I wish to acknowledge my deep debt of gratitude to them. I also owe a debt to Professor Walter S. Hunter, Professor Harold Schlosberg, and my other colleagues at Brown University, and to Dr. Arthur Ruggles of Butler Hospital, for ten happy years of opportunity for learning and work.

PSYCHOLOGICAL SERVICES AND SOCIAL SUPPORT FOR PSYCHOLOGICAL SCIENCE

Professor Boring has said that "Science progresses most when it can disregard practical ends, but the practical values are nevertheless its ultimate social sanction" (7, p. 9). I have already indicated my reservations for the first clause of this sentence, but it is the second clause that I now wish to emphasize. Ever since Francis Bacon set forth his program in the *New Organon*, and perhaps before, the notion that knowledge is for man's sake rather than its own has had champions at least among English-speaking peoples (10). The tremendous contributions of physical and biological science to the solution of practical problems are now obvious. They are behind the large current support for science. One can also illustrate from our own history the importance of practical contributions for the social support of science. The two greatest spurts of growth in American psychology, both of which reflect increments of social support, followed the two world wars wherein psychologists had proved helpful with a variety of practical human problems. The failure of the structuralism of Wundt and Titchener to yield solutions to practical problems is undoubtedly one reason why, for all its logical rigor, this development is now hardly more than a series of chapters in the history of psychology.³ In contrast, the psychological testing of Galton, Cattell, Binet, Terman, and indeed, of Rorschach, has thrived vigorously, as has also Freudian psychology deriving from observations made in psychotherapy. Such lines of effort as testing and psychotherapy have either contributed or promised solutions to practical problems, and it is solutions to practical problems which lay up credit for the firm of psychology in the bank of society. It is this credit which supports research efforts that make no immediate contribution to the needs of the day. This is a reason of no mean importance for having our psychologi-

cal services and our psychological science under the same banner.

However, there are other more profound reasons for a unity of psychological services and psychological sciences. These derive from the nature of scientific enterprise and the task of bringing it to bear in the areas of human development and human relations.

ON THE NATURE OF SCIENCE

The nature of science is all too often misunderstood and even though I may here be carrying coals to Newcastle, I must cite some of its salient characteristics, as I understand them, to make my further argument clear. Although objectivity is a hallmark of science, men may be effective scientists without a "mind trained to an exact and impartial analysis of facts," to use Pearson's words.⁴ Measurement is another hallmark of science, but measurement is but an observational tool and an aid to theory. At any given time a science may appear to be a body of facts and principles, but these facts and principles change, and often radically, as one can see by examining the textbooks of the past in any field with which one is currently familiar. The notion that one day the ultimate truth will be found is to me but a faith and perhaps a vain faith unnecessary for science. Science has also been characterized as a method, but the variety of things scientists do stretches the connotation of the word *method* almost beyond recognition.

Science is probably best conceived dynamically as a kind of enterprise or as a complex, highly generalized form of inquiring behavior (15, 18, 78).⁵

⁴ Anthony Standen (79), who sometimes hits cleanly as well as misses badly in his popular critique of science, is quite correct, I believe, in his ridicule of the propagandistic notion which probably had its origin in Thomas Huxley, but which gets a kind of official scientific sanction from Pearson, that "modern science as training of the mind to an exact and impartial analysis of facts is an education especially fitted to promote sound citizenship" (71, p. 13). On the other hand, as an educational device, neither is it inferior, I believe, to the classics. In this quotation, Pearson implicitly accepts something very similar to the outworn notion of education as a kind of mental discipline.

⁵ There are other interpretations of science, of course, so why do I choose this one? From the immediate standpoint, the ideas expressed here took this shape as I read or reread some of the classics and some of the recent writings in the history and the philosophy of science. But why do I find Dewey's naturalistic logic (18), Conant's (15) case studies of scientific tactics and strategy, and Crowther's (17) writings on the social relations of science so appeal-

³ Lanier has characterized this development as the most colossal blind alley in the history of psychology (48), and has pointed out that its failure was based upon a misleading analysis of "scientific description." Whereas Titchener and Wundt had conceived scientific description in terms of structural classification based largely on phenomenological resemblances, "Classification makes scientific sense only in terms of the implied functional properties of the classified events" (49).

Although, to quote Crowther (17, p. 1), "Science [has become a] system of behavior by which man acquires mastery of his environment," and I would like to add, hopefully, of himself and his interpersonal relations, the goal of this form of inquiring enterprise is dependable knowledge, warranted assertions (18), or conceptual systems (15), rather than the arrangement of conditions for use or satisfaction.

Like all behavior, inquiry has its biological origins in those situations which excite organisms to action, i.e., drive. At the lowest level in the evolutionary process, the responsive action functions to modify the relations of an organism to the situation in order to reduce drive and sustain life. As the symbolic process (39) develops with more and more complex systems of response-produced cues (32, 19, 50, 51) which reach full flower in the language and mathematics of communication (62, 66, 70), the exciting situations or troubles get symbolized in propositions and become problems (18). The solution of such problems, however, consists of changing the situation or the action in it to permit goal achievements of use or satisfaction. This is ordinary, common-sense problem-solving. With still further development, the problems or troubles come to be posed as interpretative questions about the relations between antecedent conditions and consequences or between classes of variables. The solution or answer then becomes a general proposition describing the relations under question.⁴

From an analysis of how men of science have behaved in their scientific endeavors, naturalistic logic (18) finds three indispensable conditions of scientific inquiry. First, the conceptual interpretations of the questions should be held tentatively as hypotheses or guesses. As Freud has said, a man of science must bear uncertainty. Second, the interpretations of relationships must tell the inquirer what to observe and how to make or select appropriate changes in the conditions which are guessed

ing? The answer is probably that they bolster my own views which recollection indicates were planted in Sunday-afternoon discussions with my father who steered me as a young adolescent to certain of the writings of Darwin, Thomas Huxley, and also John Fiske who wrote on the religious implications of the theory of biological evolution.

⁴ In this paragraph I am chiefly embracing Dewey's postulate of continuity, but the view is not incongruent with those of certain of the sociologists of knowledge, who, of course, properly emphasize the cultural factors influencing scientific enterprise (see 56; 59).

to have consequences of a given kind. And third, the interpretations or guesses are tested and must be revised if they fail to predict the consequences. It is this third condition which gives science its crucial self-corrective characteristic.

Scientific inquiry appears to require then, above all else, a close and proper conjoining of observing and doing—under which, for short, I shall subsume both the manipulation of things and the deliberate varying of conditions—with generalized thinking.⁷ Otherwise the dynamic of the process is tremendously slowed. This point is entertainingly illustrated by Wendell Johnson's story of the plogglies (41, pp. 76 ff.). It is also "brought home" with force by the history of thought and of man's efforts with his various problems (4, 17, 20, 28, 78).

Illustrations from History

The shortcomings of observing and doing without generalized thinking are illustrated by contrasting the rate of growth in man's comprehension and control of nature before and after the Renaissance when the highly generalized complex of scientific behavior began to get established in numbers of men. Arts and crafts had been slowly developing for thousands of years. The Egyptians who built the pyramids and the slave artisans of Greece who built such grand structures as the Parthenon must have manipulated, measured, and observed their materials with care, but what and how they thought and behaved has had to be a problem of reconstruction for archeologists from the artifacts which remain.

The ancient Greeks are usually credited with the development of generalized thinking (7, 17, 20, 78).⁸ They also borrowed the institution of slavery. On the one hand, this institution may

⁷ Language is undoubtedly crucial in this conjoining. Whether it is truly "possible to include without remainder the study of science under the study of the language of science" (66), however, I am not prepared to say. There is no doubt that the scientist unites empiricism (observing and doing) with methodological rationalism (generalized thinking). Moreover, the idea expressed in Stevens' pretty figure, that "Semiotic studies how this marriage is consecrated" (80, p. 44) is attractive. I am skeptical, however, of the words "without remainder," for they smack of the nothing-but reductionism which we are learning to avoid (21).

⁸ Other contemporary inventions of probably equal cultural importance are that of the iron industry by the Hittites, and that of the alphabet by the Phoenicians, but they are not relevant to my story.

have helped provide the individualistic Greeks with the leisure to debate and argue their guesses and speculations. On the other hand, as Crowther (17) reasonably argues, the institution of slavery caused them to hold the manual operations and observations of their slave-artisans in contempt, and thus separated them and their speculations from these checks. The Greeks lived in an equalitarian community, a condition which made persuasive proof the goal of their discourse. Although they bequeathed to posterity many symbolic habits or conceptual systems, these conceptions were untested by observing and doing.

The Greeks were Stone Age farmers when the urban civilizations of Babylonia and Egypt developed. Homer's epic poems depict them as technically backward and struggling for power. They were also individualistic. As they developed their seagoing, mercantile civilization, their trading brought them a variety of conceptions from Babylonia and Egypt and the symbolic tool of an alphabet from the Phoenicians. One may guess that the variety of ideas to which these individualistic gentlemen were exposed prompted them to make their comparisons and innovations. Thales, an international merchant, expanded on the Babylonian idea that the earth was made from water by God and came up with the notion that the universe, including the stars, consisted of water in a continual state of transformation. Babylonian theism was a weak symbolic habit for Thales, so he was permitted in his speculation to conceive of the universe as a self-developing process composed of one simple material, an idea not unlike the modern conception of evolution.

Anaximander, a fellow Miletian merchant, expanded on Thales' notion by postulating "a primary substance, eternal, infinite and endowed with circular motion. Hot was separated from cold, and fire leapt upwards, forming the fires of the sun, moon and stars . . . poised in space because of 'the similar distance from everything'" (20). These are guesses on the grand scale.

Such examples of early Greek speculation are fascinating, but they did not control subsequent developments in Greek thought and they are probably much less important than the play with mathematical symbols by such of the Greeks as Thales, with his idea of geometrical proof (4, 28) which were extended by Pythagoras, Zeno, and others and finally systematized along with other developments

in Greek mathematics by Euclid at Alexandria. These provided conceptual tools ready-made for the early astronomers and physicists of the Renaissance.

One of the conceptual developments in Greece inhibited the development of science. Heraclitus, another citizen of Miletus, discriminated between the senses and reason when he propounded the idea that "the eyes and ears are bad witnesses for men if the mind cannot interpret what they say." Apparently because he was threatened by the flux or impermanence of those material facts he observed, he depreciated them as deceptive. Only the permanent could be good and true, so the mind was exalted, the senses deprecated. Pythagoras greatly reinforced this habit of thought with his notion that *only* such abstract ideas as triangles, circles, and the relations among geometrical figures could be real, absolute, and eternal truths. How often today do we hear of this grand symbol game of mathematics spoken of as the only true science!⁹

Socrates and Plato pushed this line of conceptualization into the area of human relations (17, 20, 84). Pythagoras' mathematical arguments convinced Socrates, who was concerned with the social problems of Athens, that such absolute, eternal, and divine truths in mathematics implied absolute, eternal, and divine goodness. He believed that these problems could be remedied only if absolute goodness existed, was recognized, and was adopted as a guide for the conduct of the Athenians. Revolutions in thought come late in those areas emotionally closest to man, but is not the battle of cultural relativism the revolt against Plato's moral absolutes? There appears also to be a counter-revolution in the emergence of neo-orthodoxies in religion (69). It is worth noting in the context of the debate mentioned about social science that so long as the appeal for decision in social values and action is to a hypostasized reason or to the giants of the past, the process can only lead to controversy and ultimately to battle over *whose* reason and *which* giants. A scientific base for social ethics, or to use an older term with a modern implication, moral science, may now be but a "pious hope." It is, however, a hope that we may come to treat values as guesses about the outcome of

⁹ This reification of thought, with consequent self-evident axioms, has even tended to curb mathematical developments by limiting the freedom to postulate in order to develop a lead (4, 17, 28).

social action, and that we may find a way to confront these guesses with their consequences so that the consequences will tell us when we are wrong.

It was Plato, of course, who pushed this exaltation of man's symbol systems to the logical extreme by arguing for the prior reality of ideas. In the *Republic* he also provided an apologia for something much like the fascist state with his fantasy about an oligarchy of the wise. The effects showed most clearly, however, when his student Aristotle systematized the thought of that age. It is to Aristotle that we usually attribute the notions of unchanging substances with their fixed essences.¹⁰ In some topics where men have long had their symbolic processes operating in proper conjunction with observing and doing, Aristotle's essences sound strange and foolish. When, for instance, we find him saying that the heavens are spherical, because they are perfect, and only the sphere is a perfect form, or discoursing of the four elements of matter (earth, fire, air, and water), each with its peculiar combination of qualitative attributes, or describing the three mutually exclusive kinds of movement (circular, to and fro, up and down), we regard it as palpable nonsense even though we may not be very familiar with the modern language and operations of astronomy, chemistry, and physics (53). But in biology where something akin to these substances serves as the conceptual model for taxonomy, these ideas do not sound quite so strange (6). On the other hand, the battle, so valiantly waged by Darwin and his successors, to eliminate the notion of the immutable permanence of species and to treat them as convenient concepts (5) is scarcely over. And what about us psychologists? To what extent are such of our concepts as constitution as fixed, of intelligence as a kind of entity, of id, ego, and superego as existential parts of personality, of traits as real substances of personality, and even of personality as something real

with either factored structures or dimensions; to what extent are such concepts cut from symbolic habits of the same cloth?¹¹

The institution of slavery and the conceptual exaltation of the mental and the permanent combined to keep the generalized thinking of the Greeks and Romans largely unchecked by appropriate observations and manipulations of conditions. The barbarian invasions felled the Roman empire and purged European culture of the institution of slavery. Christian social philosophy, feudal society, and the growth of the *bourgeoisie* within feudal society, all appear to have combined to raise the repute of manual work. Moreover, bourgeois commerce re-established the motive for financial gain. Internecine wars motivated an interest in mechanics. When the generalized thinking of the Greeks was rediscovered under these new conditions at the time of the Renaissance, the stage was socially set for an effective conjoining of thought with observing and doing for a major development in physical and mechanical science (see 17, 20, 78).

Effective conjoining of generalized thinking with observing and doing is nicely illustrated by those case histories of early physical science so well presented by Conant (15). I am impressed by the number of these early developments that began with attempts to explain practical mechanical problems.¹² In his *Dialogues Concerning Two New Sciences*, Galileo indicates that he frequently visited with the artisans of the Venetian arsenal. One major scientific development, for instance, was started when a water pump failed to work. Galileo

¹¹ The answer, of course, depends upon the manner in which these terms are defined. For such writers as Cattell (11), T. L. Kelley (43), and Thurstone (82), factors acquire a static reality which appears to me to be closely related to Aristotle's essences. For such writers as Anastasi (2) and Burt (9), on the other hand, factors are but convenient categories permitting the simplification of test results to make predictions about people with maximal efficiency, a very different interpretation.

¹⁰ John Dewey's *Logic* (18, Ch. 5) and Charles Morris' *Semiosis* (65, 66) both set the tasks of freeing the theory of inquiry from these habits of thought and of determining the rules by means of which fruitful inquiry is conducted. It must be said in behalf of Aristotle, however, that in his later work he himself broke with the ideas of his teacher, Plato, left the Academy and founded the Lyceum where he devoted himself to biological research in which he may have had the help of Alexander's imperial officers (17, 20). If this be true (Singer's account [77] would imply that it is not), it may be that Aristotle, among his many firsts, also led the first example of government-supported, program research.

¹² In fact, the cultural issues of the day have apparently had a major role in the control of a majority of at least the early developments in science (17, 56, 59). One thinks of the great Newton as a giant apart, but the practical problems of navigation, i.e., finding longitude at sea, combined with the earlier attempts in this area set the stage for his theoretical synthesis of the problems of gravitation, circular motion, planetary and lunar movement, and the shape and size of the earth, which theoretical synthesis is set forth in the *Principia* (17, Sec. 63). Interest in some of the practical problems of fermentation also led Pasteur, originally a chemist, to the bacterial conception of disease.

first thought the pump was out of order. The artisan called to fix it indicated that the water in the cistern had fallen too low for the pump to raise it. This artisan pointed out from his practical experience "that it was not possible either by a pump or any other machine working on the principle of attraction, to lift water a hair's breadth above 18 cubits" (i.e., 24 feet, but 34 feet at sea level with perfect instruments) (17). Nature apparently abhors a vacuum only to a limited extent. For Galileo this was a problem, something special to be explained. He guessed that the weight of the water in a column longer than 34 feet must be such as to break the column just as a long-enough wire will break of its own weight. Like the majority of our guesses, this one by the great Galileo was wrong. It led nowhere. His student, Torricelli, however, breaking cleanly with Aristotle's notion that nature abhors a vacuum, got another idea. He conceived the earth surrounded by a sea of air with weight. This air would exert a certain amount of pressure on all objects. If this pressure sustained a 34-foot column of water, mercury, being 14 times as heavy as water, he deduced, should be sustained in a column only one-fourteenth as high. Doing originally the now well-worn high-school experiment with the sealed-glass tube filled with mercury, and inverted into an open dish of mercury, with the open end held to prevent escape in the process, Torricelli and his associate, Viviani, found that—lo and behold—they were correct. Blaise Pascal heard the story. Interested, he reasoned that if one were to move to higher altitudes the weight of air should diminish, and therefore sustain a shorter column of mercury. Sending his obliging brother-in-law up a mountain with the Torricellian apparatus confirmed his hypothesis. Three new techniques derived from this chain of reasoning, acting, and observing. One was the use of mercury in open vessels and tubes to experiment with gases; the second, a method of producing a vacuum; and the third, the invention of the barometer. Science had begun to move in a new area.

One of the lessons of Conant's (15) case histories of scientists in action is that there is no single system of combining thought with observation and doing which is fruitful. Galileo appears to have started the development just described simply by noting the factual limitation in the proposition that nature abhors a vacuum. His explanation, however, held to the established conceptual system from Aristotle. Torricelli, starting

with a fresh guess from a chain of interconnected propositions, illustrates Conant's strategic principle that "it takes a new conceptual scheme to cause the abandonment of an old one" (15, p. 181).¹³

Although conceptual schemes are central, they need not be the starting point. Galvani, for instance, began with an observation that a frog's leg will twitch when the crural nerves are touched by a metallic scalpel in the neighborhood of an electrostatic machine. His systematic explorations of this chance observation led Galvani to the principle of the electric battery, misinterpreted as animal electricity. When Volta "found that the frog could be eliminated in favor of almost any moist material," he had invented the electric battery. Study of the new gadget led Volta and his successors to new conceptual schemes about electricity. The invention of gadgets has regularly been of tremendous importance in the uncovering of new facts with which to test conceptual schemes. Witness, for example, the import of the vacuum-tube amplifier on conceptual development in neurophysiology, the importance of which for psychology has been so well emphasized by Hebb (29). Witness, even more recently what the development of voice recorders taking an hour's talk have meant for research in psychotherapy. Such gadgets would have been useless here, however, were it not for the behavioral innovation of their use. At the risk of embarrassing them, I would venture the guess that Carl Rogers and his students have done more for research in psychotherapy than any other persons since Freud.¹⁴ I am not presuming to assess the conceptual scheme that serves this group. My guess is based upon the fact that their courage in recording their own behavior as well as that of their clients captures the data with which to confront hitherto untestable hypotheses. The upshot of this paragraph is that there are many diverse ways to foster that combination of thinking with observing and doing which moves the scientific process.

One item of caution. It is not always enough to combine thought properly with observing and doing, not even in an area of practical problems about which many men are highly motivated for

¹³ This principle is better illustrated by the case history of the chemical revolution, or the overthrow of the phlogiston principle (15, Ch. 7).

¹⁴ Although Earl Zinn, to my own knowledge, anticipated Rogers in making such recordings, he did not publish them, and he lacked a group of students around him who could multiply the example.

solutions. Even these ingredients may fail to get the scientific process rolling in a given area. One can illustrate this point with Greek medicine. It is credited with being the first balanced science (17, 20, 78). The Greek gentlemen were athletes and soldiers who frequently got hurt. Possibly because of their concern for their own welfare, they trusted only other gentlemen of their own class with the healing art. In this special area, intellectually able and individualistically responsible Greek gentlemen were provided with opportunity to observe and manipulate as well as think. At any rate, the writings of the Hypocrateans "not only rejected superstition, but attacked the speculative philosophers and 'all those who attempt to speak or write about medicine with an hypothesis or postulate as the basis of their arguments.' They recommended that philosophers restrict their speculations to things in the sky, or under the earth, as these things are not accessible to inspection and test. They claimed reliable data, and to have discovered a principle and a method by which many discoveries had been made . . ." (17, p. 60). Nevertheless the light went out. Not all of the reasons are clear, but of likely importance is the fact that the supporting advances in physics, chemistry, and biology were not yet there, and that the Greek physicians being physicians first and scientists afterward failed to get on the roundabout route which was actually necessary. This is a sense in which Boring is correct in saying that "Science progresses most when it can disregard practical ends" (7, p. 9).

SCIENTIFIC BEHAVIOR WELL ESTABLISHED IN TRADITIONAL FIELDS OF PSYCHOLOGY

The proper combination of conceptualizing with directed observing and experimental doing has become well established in such areas of psychology as those concerned with receptor processes, physiological psychology, and learning. Conceptual ferment is rife, but no longer is it chiefly an occasion for verbal controversy. The conceptions now direct experimental activities which yield measured observational data which modify the concepts. From the field of learning such developments as those concerning behavior dynamics,¹⁵ mediational proc-

esses, and communication,¹⁶ promise to contribute much to the understanding of personality and social psychology.

Moreover, these areas are feeding back applications; there is a growing profession of applied experimental psychology (24, 40, 42, 81). As I see it, most of applied experimental psychology still consists to a large degree of applying our methods to practical problems. This is one reason why I believe work with these problems can be as fruitful as any other of conceptual schemes. There are clear instances, however, of applied science in the deductive sense. Just for instance, Walter Miles' suggestion (61) of red goggles in 1941, as a practical method of securing and maintaining dark adaptation, while allowing men to pursue their duties under ordinary illumination, is as pretty an example of applying the conceptual scheme of human vision to a practical situation as one could want to find. These technological services help lay up credit for the firm of psychology in the bank of society.

Some psychologists, as well as men from other fields of science, are asking, however, whether too many are turning to practical problems. They fear that the lure of government money is distracting the hands from tending the goose that lays the golden eggs we call concepts, if I may adapt Fernberger's (22) metaphor.¹⁷ On the one hand, I should guess that well-trained psychologists are about as likely to hit upon new conceptual schemes when they are working on such practical, human problems as those in equipment design, in searching for the principles of teaching men how to diagnose engine failures, or in finding better ways of organizing work crews as they would be working with minor deductions from existing bodies of psycho-

¹⁵ I am thinking here of all the work on motivation, but especially of that on acquired drive (64, 67, Solomon's very interesting work in this area is still unpublished), and conflict (63).

¹⁶ A new development is emerging here which appears to me to have great promise. Osgood's *Semantic Differential* (70) as a measure of meaning may provide a more effective method of assessing both personality and public opinion for certain purposes than any we now have. Moreover, it is a method which is related to an articulated body of established psychological theory. This development may also lend empirical basis for the large importance Morris (66, Ch. 7) gives theoretically to signs, the concept of which he (65) regards as probably as basic for the behavior sciences as the concept of the atom has been for the physical sciences or the concept of the cell for the biological sciences. What a reversal of view since the day when Titchener attempted to rule meaning out of psychological science!

¹⁷ Fernberger originally considered the clinical field as the distractor.

logical theory. On the other hand, the stymie of Greek medicine is a warning that commitment to any practical problem may not pay off. The question becomes one of who should be committed. It is, I believe, a tragic error for any psychologist who has his scientific nose on a hot trail to be seduced to commit himself elsewhere by money or anything else. But we psychologists are people and products of our culture, and our wives and children like to eat and to have nice things. This means to me that the administrators of scientific efforts have a responsibility to society to mark such men and to reward them with salaries and freedom from extraneous duties so that they need not be so tempted. The Lord knows that there are so few such original men that there will be plenty left to commit to the solution of practical problems, and many are happier for having a problem supplied.

There is still another aspect of this issue. Hot scientific trails peter out, as we all know. This fact suggests that the same psychologist might better be free at one stage of his life and committed by contract at another. Industrial research administrators have considered it wise to help men shift their problems whenever they were stymied (58). Here is a place where we might well attempt to cultivate some new discriminations and mores for our scientific culture.

PSYCHOLOGICAL SERVICES TO PSYCHOLOGICAL SCIENCE

It is not enough, however, that the proper complex of scientific behavior has become well established in these more traditional areas of psychology (1). As Marquis has said, "Many of the crucial problems of our society are problems of human relations and social organization. . . . [The products of physical technology] create such rapid changes in our way of life that the traditional trial-and-error methods of social adaptation are totally inadequate" (57, p. 430). But there are major obstacles in the way of getting the proper combination of generalized thinking with observing and doing in these frontier areas. These obstacles should not resign us, however, as some of the critics of social science counsel, to a dependence upon the "eternal verities" of past schools of conviction for our guides to practical decisions.¹⁸ These obsta-

cles are tactical in nature. I have confidence that they can gradually be overcome. It is my main thesis that psychological services, and also other forms of service, constitute a highly important resource in overcoming these obstacles.

Analysis indicates that there are four of these major obstacles.¹⁹ The first, and the one most commonly mentioned, is the strong emotion connected with personal behavior and decisions in such areas as child-rearing, interpersonal relations, and administrative policy decisions. A second obstacle is the broad gap separating those who behave or make the decisions and reap the consequences and those who attempt to conceptualize the nature of the relationships between various kinds of behavior and decisions, on the one hand, and their consequences, on the other hand. A third obstacle is the time span between the conditioning behavior or policy decisions and the reaping of their consequences. Finally, a fourth obstacle resides in the variability of complex, human action and in the number of diverse factors which can influence the consequences of behavior or moral decisions. Let us consider these obstacles in turn and examine the role psychological services can play in overcoming them.

Human emotions have tended to interfere with most of the spurts of scientific growth, as one can see from White's *History of the Warfare of Science* (85), but they have not halted that growth. They are especially potent obstacles, however, in the personality and social areas. First, parents and administrators can seldom bear the emotional impact of their own involvement as expressed in Whittier's lines in *Maud Muller*, "For all sad words of tongue or pen, the saddest are these: 'It might have been!'" They have to "pull up their socks and get on with it," so they say, "It's no use crying over spilt milk." As a consequence the relationships between conditioning behavior and consequences go largely unanalyzed by the participants. This indicates that the practical actor and the investigator must be separate people. Secondly,

many of the propositions from this heritage are inconsistent. They, like reasoned guesses, require empirical tests. In this connection, although I should like to reserve judgment about his conception of the structure of psychoneurosis, I want to salute my colleague, Hobart Mowrer (68) for taking the superego and its implications out of the psychological doghouse.

¹⁸ I certainly do not mean to deprecate the wisdom of the past here. The propositions from our religious and cultural heritage contain commonly the best rules we have to guide personal and social behavior. On the other hand,

¹⁹ Although this analysis has been growing out of my personal research experience, it undoubtedly owes a debt to Chapter 24 in John Dewey's *Logic* (18).

people—and all too often we psychologists as well as others—have the symbolic habit of seeing their parental behavior and their administrative and policy decisions in terms of moral praise and blame. This blocks the acceptance of the background convictions from which they derive as hypotheses or guesses which can be tested only by their consequences. This rigidity, in turn, interferes with what, for short, I have been calling *doing*, namely, the deliberate modification of behavior and policies necessary to permit observations relevant to the testing of convictions seen as hypotheses about their relationships to consequences.

The traditional tactic around this obstacle is to use field methods of selecting and comparing the consequences of behavior and policies dictated by the various schools of conviction. This can be highly successful. Witness the comparing by Sears and Wise (75) of the amount of thumbsucking and oral drive of children who had been cup-fed from birth and of children who had sucked for their food (other examples: 33 and 52). So long as we must wait for chance combinations of circumstances proper to the testing of hypotheses to occur, however, this method is slow and clumsy. We need to organize deliberately the operations of those from differing schools of conviction for comparison, and we need the possibility of modifying behavioral and policy decisions deliberately. In the case of the latter, prudence dictates that we begin where the emotional resistance is relatively low. This is what I believe Lewin, Lippitt, and White (54) did in their pioneering study of aggressive behavior in experimentally created "social climates." I am very much impressed with what can be done in the way of such deliberate manipulations in the setting of recreational services like summer camps and free vacation centers for families (38, 72).²⁰ The tactic of "action research" is also of this variety. I believe it is in the area of social services and social action that we find the greatest opportunity for deliberate manipulations of conditions and the measurement of their consequences. Successes in this area will probably soften the emotional rigidities which now serve as the obstacle. I believe there are signs that the growing acceptance of services

of a psychological nature is already softening them. It should not be forgotten, moreover, that the skills learned in psychotherapy and group dynamics are helpful tools in dealing with these rigidities.

As already indicated, the emotional involvement of people in their practical action requires that practical actor and conceptualizer must be separate people. This gives rise to the second obstacle, the broad gap now usually separating those who make the decisions which have consequences and those who attempt to conceptualize the relationships. Parents and the administrators of practical affairs have to decide and to act. While they do the best they can with the rules from the school of conviction which happens to guide them, we psychologists and our colleagues in all the social sciences, are located where we all too seldom even see any sequences of decision-action and consequences, not to mention having the opportunity to modify circumstances for theory testing. Field observation and such analogous extensions as the examination of the archives of political action, have been and will undoubtedly continue to be one major tactic for bridging this gap. Another tactic with tremendous potential, I believe, is to offer psychological services as a basis for research or at least to bring services of various kinds within the administrative control of agencies where getting knowledge and testing hypotheses are the main business. There is a variety of possible patterns for the organization of such agencies, but more of that in a moment.

The third obstacle, the time span between the determining behavior and conditions, on the one hand, and their consequences, on the other, is always troublesome. It may be insurmountable in the area of political behavior, but let us concern ourselves with the more hopeful areas of personality development and social action where it is troublesome enough. The traditional strategy here has been to employ retrospective approaches. The case study method, the retrospective designs for social studies so well formalized by Chapin (12), a good neighbor from sociology, and the critical examination of history (83) are typical examples. Such tactics have been highly useful, but all too commonly the threads of relationship are unclear between various antecedent conditions seen in retrospect and the present consequences observed or measured. If we are to test the various hypotheses which have derived from the retrospective approaches, I believe we must develop prospective approaches.

²⁰ I am thinking here of the summer camps and especially of Sea Breeze, a vacation resort for families, maintained by the Community Service Society of New York. My experience as research director in this fine, old social agency provided the stimulus and background for much of this discussion.

Let me illustrate with the area of personality development where I am familiar. Case history and cross-sectional methods are too commonly ambiguous. I believe the antecedent conditions of parental behavior will have to be prescribed, and the hypotheses so formulated that they tell what subsequent consequences to look for. Otherwise, we shall be babbling vaguely about the total personality. This means that some agent of inquiry must be on hand at both ends of the time span to set the conditions and observe the consequences, and this agent should also be available to observe and to record the relevant intervening factors.

Using short-lived animal subjects (34, 37) can decrease the time span for such prospective inquiries of the life history, and fruitful studies can be made with them. Animal subjects will not, however, permit tests of hypotheses about relationships between parental behavior, on the one hand, and such essential human behavior as language development or the nature of the self concept (31), on the other. Such studies call for a way to motivate human subjects to come at intervals or to stay within observational range. Services, psychological and also other kinds, appear to me to be the answer. It will be well to start with problems involving time spans within manageable bonds. When the conceptual leads call clearly for longer intervals, let us organize scientific task forces of practitioners of services and scientists to persist in time.

The fourth major obstacle resides in the variability of human action and in the number of different factors which can be relevant in determining its consequences. This greatly complicates the inductive phase of inquiry in personality development and social psychology. By way of illustration, let me recall Krech's (47) half-serious provocation to the effect that a psychologist who had studied *The Law of Effect in the Maze-Learning of Albino Rats* might better have spent his time studying *The Law of Effect in Attitude-Formation among Republicans* (or, to be unpartisan, I might add, *Democrats*). The point comes in Crannell's rejoinder that "No rat psychologist would be very curious to know whether the first experiment dealt with New York rats, Minnesota rats, or California rats, but who would venture to say the same for Republicans" (16, p. 22)?²¹ This obstacle means that many of

the basic hypotheses in the areas of personality development and social behavior cannot be tested by the traditional manipulation of a single independent variable and the measurement of consequences in a single dependent variable. Ultimately some of these problems will require enormous samples of measures, probably strained through factor, latent-structure, or some other brand of statistical analysis to aid in capturing the relevant factors in a matrix of many. They will not yield to individual scientific entrepreneurs with their small-sample picks and their mechanical-calculator shovels. All this leads me to share with others (23, 55, 57) the conviction that we in our civilization shall have to organize for scientific ends just as we have organized for industrial production. Although I cannot escape such a vision of scientific things to be, I must confess that it makes me look back with nostalgia on the secluded comfort of a quiet rat laboratory with its friendly characteristic stink. This prompts me to say that organized task forces are scientific means to be employed only when necessary, and much of psychological science can still go on being conducted in the quiet of laboratories by individual scientific entrepreneurs.

The Illustration of Psychotherapy

Let me illustrate my thesis from within one field. It is often claimed that psychotherapy provides the fundamental research method for learning about personality dynamics and development and to a degree about human relations in general (e.g., 3). There is little doubt that psychotherapy has been the single most fruitful source of new conceptual systems in these areas for the past half-century, but I believe that era is closing.

Psychotherapy appears to have been fruitful as a mode of investigation precisely because it succeeded partially in by-passing the first three obstacles I have just described. The client, a practical actor, comes to the psychotherapist, in the role of observer-conceptualizer, for help with the present consequences of his past life: the behavior of his parents and his social interaction with them and others. The client's limited awareness of the nature of present consequences and the conditioning factors of the past illustrates the expected effect of his emotional involvement in his own practical action. The psychotherapist-observer-conceptualizer, however, has the advantages of being free of this emotional involvement. In listening to the recollections and free associations of the client, moreover, he has

²¹ This analogy loses some of its force when one considers Christie's contention that the modes of handling rat colonies in various universities may account partly for the variations of experimental results associated with universities (13).

a vantage point for observation which both bridges the gap between actor and conceptualizer and circumvents partially the obstacle of the time span. Observations from this vantage point fail, however, to avoid the obstacle of human variability.

The psychotherapeutic approach never more than partially circumvented any of these first three obstacles. In one sense the scientific role of the psychotherapist resembles that of the early geographic explorers who went to see, but without proper recording instruments, and could report back to their colleagues and society at large only their own private impressions. Their impressions, however, could be checked by other explorers following the same route. Here my analogy breaks down, for the variability of both psychotherapists and clients functioning in what Sears (74) has described as a dyadic social unit obviates any close following of the same route. It is not surprising, therefore, that the conceptualizing from such a source has taken the form of schools of conviction headed by such figures as Freud, Horney, Mowrer, Rogers, and Sullivan. It is, I believe, impossible to test these new conceptions by the same methods of investigation that produced them. But we have the conceptions, and it should be said that Mowrer and Rogers are in the vanguard of those developing new methods with which to confront them with relevant observations. Whenever in the process of science one mode of operation is leading to schools of conviction, it probably means that the methods are outworn and need to be changed.

On these grounds, I fear that those who would enter psychotherapy as individual entrepreneurs hoping to contribute further to our knowledge of personality are attempting to mine a vein where the rich conceptual ore is now hard to find.²² A change of mining technique is called for. The hypotheses about personality development, for example, call, I believe, for prospective designs and sampling observations of interpersonal relationships in families. Offering services promises to bring families within range for such observations if the stage is properly set. The hypotheses about the nature of neurosis and about which factors in the psychotherapeutic relationship are effective, as other examples, call, I believe, for the organization of task forces of psychotherapists and researchers. In these task forces, the behavior of the psychotherapists in their psychotherapeutic role is as much the

subject of research as is that of their clients. One of the first questions here concerns what kinds of clients accept what kinds of psychotherapists and vice versa (for other questions, see 35).

Organizational Possibilities

It is probably too much to hope that professional psychology can give all the services psychological scientists will need for their data. Professional psychology arrived after a number of service professions in the areas of human relations had already developed. This implies to me that we should depend upon collaborative relationships with other professions for the services required for access to many of the data we shall need. Although psychology has an established habit of collaborating with psychiatry and education in both science and service, we have hardly scratched the surface of the possibilities for collaboration with pediatrics, social work, labor-management conciliation, agencies changing behavior in agriculture, law, and the ministry.

On the other hand, I believe an extension of the services given now by psychologists is tactically important for advancing knowledge of personality and social behavior. As task forces of service practitioners and researchers enter new scientific territory, they can probably profit from the security provided by a homogeneous professional in-group. The emotional involvement of service professions in their own rules of practical action tends to put these rules beyond question unless the practitioner is himself highly imbued with a scientific skepticism. This restrains the freedom to make the modifications in practice required for hypothesis testing (6, 46). Moreover, when the main business of an organization is giving service or getting things done, it becomes especially hard to justify modifications just for the purpose of testing reasoned guesses.

In view of these considerations, I would like to suggest that psychology go to the bank of society and borrow on the firm's credit to foster the establishment of services which are frankly administered with a view to extending knowledge. Our compact with society would be to give free services, and, let me add, good services, in exchange for activities on the part of clients which are not immediately relevant to their goals of getting help. We shall not be the first combined science and profession to do this. Medicine was probably first in attaching hospitals to schools of medicine. Education has its laboratory schools to which we psychologists also

²² I certainly do not mean to imply here that the individual psychotherapist cannot give effective service to his clients.

have access when we do not get our "purist" noses too high. Dentistry has its school clinics, and agriculture its experimental farms. We psychologists already have our clinics and counseling centers, but they are not yet organized in the fashion best designed to provide that combination of observing and doing with the generalized thinking required. In this connection, I believe we can well borrow from social work such services as free summer camps and vacation centers for families for the purposes already indicated.

The administrative arrangements can have diverse forms. Service programs might be conducted directly under university auspices. There are many precedents for these. In certain large cities, it might be feasible to set up inter-university institutes of psychological services for research purposes.²³ Another pattern, and one which appears to me to be especially promising, would consist of institutional collaboration between state universities and state departments of welfare. Any of these forms of arrangements might well start on an *ad hoc* basis and grow with scientific progress and skill-in-organization into institutes of major proportions.

PSYCHOLOGICAL SCIENCE TO PSYCHOLOGICAL SERVICES

Not only are psychological science and psychological services interdependent for what the services can contribute to the science, but psychological science has much to contribute to psychological services, and in three diverse ways.

First, the conceptual tools of psychological science can contribute to the conduct of services. A recent exemplification of such contribution is Otto Pollak's (73) application, as a consultant to a child guidance agency, of concepts from both psychology and sociology to the psychoanalytic armamentarium of case workers.²⁴ Concepts or symbolic constructs possess the merit of being "transferable from situation to situation and communicable from person to person," as Heidebreder (30, p. 173) has said; they thereby have a fundamental function in the teaching, sustaining, and improving of service skills.

Second, psychological tools of measurement have

an important contribution to make in supplementing the impressions of administrators and service practitioners concerning whether or not avowed goals are being achieved. Established psychometric and polling tools may frequently be adapted for such purposes, but a good many occasions demand that special tools be devised (36, 45). Although advertisers and business and governmental administrators have already made prevalent use of such measures, those in the humanitarian and social-action fields have used them relatively little as Robin Williams (86) has pointed out. The role of psychological tools in service evaluation should grow, for it is becoming clearer that humanitarian efforts should not operate blindly. In the meantime, we psychologists can well examine the validity of some of our own tools (44).

Third, as service practices are deliberately modified to test hypotheses, some of these modifications are very likely to produce improvements in results. As such experimentally induced improvements occur, they will be copied not only by other psychologists but by our neighbors in other service professions.

This is the way it works. Or perhaps it would be more precise to say that this is the way it should work. There is a sobering counterpoint in the fact that the faith that such an interdependency between psychological sciences and psychological services will bear fruit rests all too much upon what such an interplay between the physical sciences and technologies has yielded. It is because of this that Anthony Standen's saying that such claims for psychology are "nothing but a pious hope" (79) has been so often quoted.²⁵ We already have some successes to our own credit in the bank of society, however, and unless I am badly mistaken in this analysis of tactical requirements for the path of advancing knowledge in the areas of personality and social psychology, society can well afford to support our following it.

OTHER IMPLICATIONS

There are a number of implications from the line of argument that I have been developing to which I can only allude. If this interdependence of psychological services and psychological science is as important as I believe, it justifies our recent

²³ Dr. James Miller has suggested such an arrangement for the Chicago area.

²⁴ This work is part of the current program of the Russell Sage Foundation and was conducted in collaboration with the Jewish Board of Guardians in New York. Dr. Pollak's (73) first chapter contains what is virtually a book of etiquette for social-science consultants.

²⁵ Actually Standen (79, p. 127) uses this phrase for such postulates as: "All human behavior has a cause," and "Potentially, all human behavior can be measured and described." I have usually heard it quoted, however, in the sense referred to here in the text.

efforts with ethical codes, legal status for the profession, and the like. Let us beware, however, that these efforts foster science and the welfare of society and are not too much concerned with promoting the special welfare of our professional guild.

Our rapid growth prompts me to join enthusiastically with our Policy and Planning Board in the suggestion that we can well spend some time and effort in studying and planning for our science and that we can well join with sociologists and study our own practical decisions, as directors of a social institution, and their consequences. Perhaps we can add a cubit to the sociology of knowledge and also be practically wiser thereby.

This interdependence of psychological services and psychological science combined with Pasteur's principle that "chance favors only the prepared mind" leads me to believe strongly that, in their training, all psychologists should be steeped in the tactics and in the logic of the scientific enterprise, that they should be required to have some grasp of the current knowledge in all sciences and mathematics, and that they should have a solid grasp of psychological fields all the way from physiology to sociology (76). I also believe that a large proportion should have considerable apprenticeship in the skills of the counselor and the group dynamicist. This is a large order. In turn, it implies that we must look for some short cuts and improvements in our teaching methods. Although there may possibly come a day when it is wise for certain branches of our psychological services to become differentiated, I doubt it, and I believe such separation would be most unwise now. The potential strength of psychology lies in their remaining together. I also believe this applies, as well, to the organization of psychology departments in "ideal universities" notwithstanding the dissent of Harvard University from the report of the Harvard Commission (26).

CONCLUSION

In closing let me summarize by relating to you some of the discourse of the gods in conference on Mount Olympus about the design of their new project, *man*.²⁶

In his opening remarks about the new project, the leader of the conference, Zeus, decreed that *man*, like their earlier projects, the lower creatures,

should live in interaction with the physical environment by means of receptors and effectors. His receptors should be nicely designed, and his effectors should be relatively weak but efficient. Any depletions within his body should set man into action. The actions by virtue of his receptors and efficient effectors would usually put man into a relationship with his environment to restore the depletions. Moreover, as with the more elaborate of the lower creatures, man should have symbolic processes, to mediate between his receptors and effectors, but these should be elaborated considerably over any previously designed in the other projects so that man might have the potentiality for continuous development.

In the discussion which immediately followed these opening remarks by the chief, it was pointed out that the design, at least in mere outline, bore certain deficiencies. Eros, now of Freudian fame, Ares, of war, and the Muses all had to be assured that man's potentialities would include their departments. When Zeus had convinced them with the help of Pallas Athene, the wise, the insecure Hephaestus, armorer and fashioner of the thunderbolts, and such others as Nemesis, Poseidon, and Hermes began to wonder lest man should come to rival their own godly powers. This potentiality for man's development of power led others of the gods to consider that he would need a moral self or soul for his own protection from himself. Zeus, with pride of authorship, felt that such control would develop automatically, but he was a democratic chief, so the majority ruled. Nemesis then insisted that if man were to have a soul, it should be securely hidden lest man learn its secrets and become thereby unsufferably proud and perhaps even free. Such of the gods as Eros, Aphrodite, and Pallas Athene did not share this concern, but again the majority ruled.

The question was where to hide man's moral self or soul. Zeus suggested that it be hidden in the heavens, but Aphrodite pointed out that man would look there first. Poseidon suggested the bottom of the sea, Hermes, in the substances of the earth, and Diana, in some of the lower creatures. As these suggestions came, Aphrodite became more and more derisive at the suggesters' failure to see the implication of the previous discussion for this problem. Zeus, finally impatient, asked where she would hide it. Aphrodite answered, "Why, in man himself. It is the last place he will look because his emotional involvement in his own action will

²⁶ I claim no originality for this allegory. It is an adaptation of a story I read years ago, and I have forgotten where.

keep him from examining it. This, the time factor, and man's variability will make it exceedingly difficult, moreover, for him to discover how to look effectively for his soul." All saw the point.

As the conference drew to a close, Dionysius and the social Graces, who had been in a separate huddle, offered the suggestion that even if man's soul were hidden within him, men might develop a way to collaborate with each other in the search. With a conspiratorial smile and a nod, Pallas Athene, the wise, said, "Maybe so. Time will tell." A motion to adjourn carried.

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Journal of Experimental Psychology: Arthur W. Melton (1951-56)

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Psychological Bulletin: Wayne Dennis (1953-58)

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⁴ Term begins July 1953.

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SUMMARY REPORT ON THE 1952 ANNUAL MEETING

FILLMORE H. SANFORD

Executive Secretary, American Psychological Association

THE Washington APA meetings had more of almost everything than any other meetings in our history. There were more people, more papers, more symposia, more addresses, more outside speakers, more business meetings, more confusion, more organization, and more psychologists in a bleary-eyed refractory phase by the end of the whole conclave.

There is good reason to believe that science advanced mightily during the week. Certainly many people talked and listened science, and they are people from whom a good per capita creativity can be expected. The present report, of course, cannot pretend to summarize the scientific events of the meetings. Probably no report could, for science is subtle and psychological science is so many-faceted that even a summary of programmed titles would pose a complicated problem of classification. The present report deals more with psychologists' ideas about psychologists than with their ideas about psychology.

The Board of Directors met all day and evening on Saturday and all day Sunday preparing the agenda for the Tuesday meeting of the Council of Representatives. The Council met all day Tuesday. The Board met again at 8 A.M. on Wednesday and by 1 P.M. had finished most of its business. Two subcommittees continued to meet until dark. The Council met again on Thursday, completing its work at 4 P.M.

The members of APA's representative government thus devoted a total of approximately 1,000 man-hours during the convention to the affairs of the Association. During these periods reports from 32 APA committees and from nine representatives to other organizations were received. Most of these reports presented problems and recommendations. Most led to Council action of one sort or another. Also, action was called for and delivered on items of business arising from the concerns stated by individual members of the Association, from individual members of Board and Council, from the

Treasurer, from outside agencies, from the Central Office Staff.

The total amount of business transacted during a relatively short time makes APA government appear to be very decisive. Issues get faced, thrashed out and disposed of. By no means all dispositions are final, for psychologists seem positively disposed toward whatever tentativeness of adjustment a situation allows. But all the decisions have a bearing on psychologists. Some decisions will have differential effect on different sorts of psychologists. Some decisions will have immediate effects while the impact of others will not be felt for some years. Some will lead to genuine unhappiness on the part of some of our members. Some will lead to ritualistic complaint. Others will make a vast majority of our members proud of the Association and the way it goes about its affairs. If we buy the hypothesis that the APA is a potent force in determining the fate of American psychology and if we go along with the defensible notion that all who live under the psychologist's label have, to some extent at least, a common fate, then *all* the decisions made by the Council of Representatives will have a significance for *all* psychologists.

These decisions are systematically and succinctly presented in this issue in the annual report of the Recording Secretary. The present report represents an attempt to give APA members a general picture and some background, garnered from many thoughtful committee reports, of the Association's year of operation.

PUBLICATIONS

There was much discussion in Board and Council meetings concerning APA's large publishing venture. Behind these discussions lay an apparent concern for the future of scientific publication in general and of the APA's own long-term problems in particular. The APA has apparently survived for another year in its attempt to insure publication outlets for all publishable research while not charging the "con-

sumers"—libraries and individual psychologists—more than they can afford to pay. Financially, our over-all publication venture seems basically sound except that we are slowing down appreciably in the building of that reserve fund the Finance Committee judges necessary for the long-term assurance that our journals will appear uninterruptedly in spite of possible emergencies. The new APA building, of course, represents a sound reserve for our publishing business, for it can always be mortgaged or sold, but the Finance Committee judged the building insufficient insurance against conceivable exigencies.

The Board and Council were not primarily worried about publication finances. The worry concerned the problem of continuing to insure publication outlets for an ever-increasing flow of psychological papers. It seems to be the case, however, that this general problem cannot be confronted without having financial reality rear its head.

Several people have suggested that the increasingly frequent and relatively well-heeled sponsors of psychological research should accept some financial responsibility for publishing the results of the research they support. At the September meeting such a suggestion was made concrete and real by the tentative proposal from a military research agency that the agency write a contract with the APA to pay, on an early publication basis, the costs of publishing articles duly submitted by members of the agency and properly approved by APA editors. This concrete idea produced extended discussion in both Board and Council. The discussion involved questions extending from the basic morality of scientific publication to the technical question of determining exactly what it costs to publish an article. The Council terminally voted that it sees no basic difficulty with the general idea of an institution or agency contracting to pay for the publication of articles by its members, but the vote left the Publications Board and the Central Office with a lot of discriminating and thinking to do before such a contract is signed by the APA.

As the Recording Secretary reports, the Council also voted that the next APA Directory will appear in August, 1953 and that it will be produced by the Flexoprint process. It was the Council's judgment that August is the most useful time for the directory's appearance and the Flexoprint process the most feasible mechanism for its production. The Council also voted to refer to the Publications Board

the question of APA acceptance of *Psychological Book Previews*, a journal published and edited by John W. French. Dr. French had offered to give the journal to the APA if the APA would assume its present assets and liabilities. The Publications Board discussed the matter on September 5 and recommended against an investment of Association funds in the project. The Board of Directors later voted by mail to accept this recommendation. The Council also voted to restore the practice of giving 50 free reprints to authors of articles in our journals. This vote came in opposition to a Board recommendation that we not, for a full year at least, give free reprints. The Board seemed to take this come-uppance with gracefulness and maybe even pleasure, for it represents evidence that the Council is not a rubber-stamp entity.

The new Publications Board reported that it had held two meetings during the year and had laid solid foundations for carrying out its appointed task of over-all planning for APA's large publication venture. The Board reports a discussion and reaffirmation of accepted general publication policies in APA. The Board states the continued belief that it is a proper business of the APA to ensure the opportunity for publication in every major area of the field of psychology but that the execution of the proper business does not mean assumption or attempt to assume control over all publication outlets in psychology. The Board further reaffirms the policy that the editor of an APA journal has both freedom and responsibility, within very wide limits that may be set by the Association, for the acceptance or rejection of manuscript submitted to him.

The Publications Board also reported initial steps toward a systematic review of APA journals. During the year a subcommittee of the Board began a questionnaire study of members' reaction to the *American Psychologist*, the *Psychological Bulletin*, and the *Psychological Review*. The results of the study were not sufficiently complete to report.

The Board recommended to the Council of Representatives (a) that no new journal in the field of human engineering be now initiated, (b) that there be created a full-time paid position of Associate Editor of *Psychological Abstracts*. These recommendations were both accepted by the Council and steps taken to implement the latter.

The Council did not pass a Publications Board recommendation to the effect that all authors be charged a flat per-page rate to cover costs of special

and extra composition. This arrangement was suggested as a substitute for the present procedure of charging the individual author according to the number of special figures, tables, and cuts he employs. The Council said it does not object in principle to the flat per-page charge but it wishes to wait for further information before acting on this proposal.

Lee Cronbach was elected chairman of the Publications Board for the coming year. He replaces Edwin B. Newman.

FINANCIAL MATTERS

The Treasurer's report, printed in this issue, gives the facts about the Association's finances for 1951. The budget, in the report of the Recording Secretary, presents estimated facts about 1953 financial operations. Present estimates indicate a probable over-all deficit of a few thousand dollars for 1952. The Board and Council took a number of actions—including an increase in dues for those Associates who have been members for five years or more—to avoid a 1953 deficit but the voted budget for 1953 suggests these actions will not be successful unless combined with other actions to increase income and/or decrease expenditures. Nobody, however, appeared seriously worried about the APA's financial situation. A frequently encountered attitude is that there is nothing inherently wrong with a deficit—just so it does not become chronic. The Finance Committee agrees with this attitude, its report indicates, but while stating that it is the APA's business to spend all of its money, the Committee urges that the Association lay aside a reserve for future spending when and if the Association runs into really rough financial weather.

The 1953 budget anticipates an income of \$367,691.00 and an expenditure of \$377,995.00. A major portion of both income and expenditures, of course, is connected with our publication business. In 1953 our journals will cost us about \$250,000.00.

It is anticipated that we will have to borrow \$85,000 in late 1952 or early 1953 to complete payments on the new building. The Board, Council, and Finance Committee all agree, apparently, that it will be very desirable for the Association to pay off this debt as early as possible, for until our reserve fund (including the mortgage value of the building) is sufficiently large to cover one full year's operation, our financial status is not, according to

usual standards, as healthy as the Association's responsibilities demand it be.

Carroll Shartle was re-elected Treasurer of the Association for a five-year term.

ETHICS

In the area of ethics, the Association this year took an historical step. The Council adopted the "Ethical Standards for Psychologists" for a three-year-trial period with the idea that it will be given necessary revisions, under the guidance of a reconstituted Committee on Ethical Standards, will be submitted in detail to all APA members, and then will be acted on again by Council at the 1955 meeting. Many will agree that this action represents the most significant single step in the history of psychology as a profession. Copies of the code and of a summary of the ethical principles will be distributed to all APA members by the beginning of 1953.

Also in the ethics area, the Council voted to expel a member because of his misrepresentation of his academic training. This ethics case is the first one handled by the Association under its new Bylaws. On Tuesday the Council, responding to the recommendation of the Committee on Scientific and Professional Ethics and Conduct that the defendant be dismissed from membership in the APA, voted to offer the defendant a choice between a hearing before the whole Council and a hearing before a subcommittee of the Council. (The Bylaws imply opportunity to be heard by the whole Council.) A stand-by committee was appointed. On Wednesday the defendant, in an interview with the Committee on Scientific and Professional Ethics and Conduct, chose a hearing before the Council's subcommittee. This subcommittee conducted a hearing that lasted for approximately five hours. On Thursday morning the subcommittee brought in a recommendation that the defendant be expelled from membership on the basis of charges as preferred by the Committee on Ethics. The Council, after brief questioning, voted unanimously to accept the recommendation of the subcommittee.

It seems inevitable that with our growing size and our growing involvement with life and people, there will be an increase in the number of ethics cases APA must contend with. The existence of an ethical code will help in preventing unethical behavior and in handling cases of alleged unethicity

when they arise, but it seems a safe prediction that psychologists, with their tendency to identify with the individual, their empathy with the put-upon, their yen to help rather than to punish, their disinclination to adhere to rigid lines of demarcation between good and bad, their insistence on evidence of a psychological as well as a legal sort will go on suffering, as did the Committee on Ethics and the Council's subcommittee in the present, but will eventually rise to judgments both decent and socially responsible concerning the alleged erring of the individual psychologist.

In addition to this case, the Committee on Scientific and Professional Ethics and Conduct reported that it had disposed of 13 cases at its 1951 meeting, that four cases were carried over from 1951, that 21 new complaints had been received during 1952, that 8 of these had been satisfactorily adjusted and that 16 cases remain open in its file. For the coming year Gilbert Rich, at special request of the Council, will remain chairman of the committee.

EDUCATION AND TRAINING PROBLEMS

The Education and Training Board, after its first year of existence, reported somewhat intangible but very probably significant progress on a broad front. The Board and each of its committees held an education and training conference in February, a conference devoted to the definition and delineation of educational issues confronting psychology and to the formulation of plans and structures whereby psychologists can confront these issues. At a more concrete level, the E & T Board reported (a) the formation of a task committee to consider the mutual training problems of clinical, counseling, school, and child psychologists, (b) the planning of a future extension report presenting a full discussion of major educational issues, and (c) the completion of its annually assigned task of evaluating training programs in clinical psychology.

The individual committees in the E & T structure each reports progress in its particular area. The Committee on Undergraduate Education has prepared a report on a number of pressing and puzzling questions regarding undergraduate education, a report that may eventually reach all interested members of the Association. The committee is attempting to forward an investigation of undergraduate education in psychology by securing funds to support one or two psychologists who would, in a fel-

lowship status, spend a year visiting undergraduate programs and analyzing problems.

The Committee on Subdoctoral Education reports sponsorship at four regional meetings of provocative conferences on the problems of master's-level training. The committee prepared a report, aimed at eventual publication, giving suggestions about methods of attacking and perhaps solving the problems of what sort of training is adaptive for what sort of psychologists at the subdoctoral level. The committee states its plan of concentrating during the coming year on the question of appropriate training for subdoctoral technical workers in psychology.

The Committee on Doctoral Education, in line with its broad directive, not only completed its assigned task of evaluating programs in clinical psychology but devoted much thought to other and less specialized problems in doctoral education. The committee's concerns include, and will, it says, continue to include, such areas as (a) the nature of a desirable core curriculum in psychology, (b) the nature of successful training in theory construction and research, and (c) desirable standards for PhD programs in social and in industrial psychology. The committee will continue its program of evaluation of clinical programs and, in accordance with the motion of the Council mentioned below, will concern itself with the evaluation of training programs for vocational counseling psychologists.

The Committee on Practicum Training reports it has conducted a study of 105 agencies now training psychological interns and has experimented with a method of evaluating such centers. One or more members of the committee visited 18 centers and later sent informal letters of evaluation. The committee says they will have recommendations concerning the preparation and use of standards by which practicum training programs can be evaluated. The committee has focused initially on training in clinical psychology but reports that its concern encompasses practicum training in other areas. It has prepared a complete report aimed at eventual publication.

The Committee on Psychology in Other Professional Schools reports a fact-gathering year. It now has an extensive array of material on what is happening to and through psychologists in various professional schools. These facts, it is anticipated, will be useful in attacking the question of psychology's potential contribution to training and performing in other professional fields and of ways to maximize

this contribution through appropriate training. Very probably there will be published reports from this committee.

All the E & T committees give evidence of enthusiastic functioning, with the guidance and coordination of the E & T Board. This whole E & T structure represents something of a new departure for the APA. The general resolve to bring psychology's scientific orientation and democratic tradition to bear on the elusive problems of scientific and professional education is a development in many ways unique. The first year of this venture has yielded no very startling results. It seems to be true, however, that more and more psychologists are involved in an enlightened confusion about the education of psychologists. It is easy to believe that when many of our members come to share in the frustrations, creativity, and pleasure inherent in a cooperative and intelligent attack upon disorder, we will progress toward novel and effective ways of meeting educational issues.

During the coming year the E & T Board will have two new committees. One will be the Committee on Postdoctoral Education, the other the Committee on the Teaching of Psychology in High Schools. The E & T Board is convinced that the new PhD is not completely educated and that perhaps we can invent ways of furthering the individual's rapid development after he has obtained the doctorate, which may be perceived as not much more than an entrance requirement. The E & T people also appear convinced that the nature and extent of exposure to psychology in secondary schools has a good deal to do with the sort of students who choose psychology as a career or who, in other careers, carry with them attitudes about our field. The Board of Directors, at its March meeting, approved the existence of both committees.

Also during the coming year, the E & T Board and its Committee on Doctoral Education will be actively concerned with the training of psychologists in vocational counseling. During the summer the Veterans Administration requested APA assistance in determining which departments of psychology could offer the best training for psychologists who will fill newly established billets for counseling psychologists in VA hospitals. The E & T Board made the general recommendation that the APA meet this request and gave specific recommendations concerning methods to be employed. The Council accepted

all these recommendations. The problem and the program are described elsewhere in this issue.

Lowell Kelly was elected chairman of the Education and Training Board for the coming year. Bruce Moore will be its executive officer and will be located in the APA Central Office.

LEGISLATIVE AND POLICY MATTERS

The report of the Advisory Committee on Legislative Matters, raising the question of an official APA policy concerning legislation for psychologists, involved the Board of Directors in an intricate discussion not only of matters pertaining to legislation itself but also of the general, almost philosophical question of the Association's proper role in establishing any sort of official policy affecting individual members. Under what circumstances should APA take an official stand on such questions as academic freedom, our relations with other professions, or legislative matters? This sort of question leads to the even larger question of institutional control and individual freedom. It also leads to an examination of the proper relation between the Board of Directors and the members to whom the Board is responsible. Such discussions in the Board meeting, while leading to no concrete solutions or pronouncements, did appear to insure that the Board of Directors would not err on the side of directiveness in formulating policy recommendations and would not move lightly toward the commitment of whatever weight and influence the Association possesses.

With respect to legislation for psychologists, the Board's feeling was that we must move slowly, carefully, and thoughtfully, if at all, toward the stating of an APA policy. And there was the apparent conviction that such movement toward policy must involve the best thinking and feeling of the membership of the Association. The Board recommended and the Council passed motions designed to bring about widespread and thorough consideration of legislative matters and of the APA's proper stand concerning them. The Advisory Committee on Legislative Matters was enlarged and asked to study the issue with as much participation of the membership as can be arranged.

The Board and Council also moved slowly with respect to the report of the *Ad Hoc* Committee on Relations with the Medical Profession. (This report was published in the May, 1952 *American Psychologist*.) The report of the Committee was discussed at considerable length in Council, and the

Committee was given suggestions for certain revisions and asked to continue to work on its report toward the end that it eventually will be submitted to the full membership for approval or disapproval. The Committee was made more representative by the addition of new members and was asked to find a more appropriate name for itself. While the Committee plans to prepare a report on our relations with the medical profession, the present report, designed as necessary background for thinking about relations with any specific profession, involves our relations with all professions—and our relations with our own institutional conscience. Lowell Kelly continues as chairman of the committee.

The Committee on the Relations of Psychology to Psychiatry reported that it has worked mainly to keep open the channels of communication with psychiatrists, and that no definite program of action is possible until some of the policy matters discussed above are settled. There was during the year a joint meeting involving the Committee and the American Psychiatric Association's Committee on Clinical Psychology. The meeting, the Committee reports, was characterized by good and rational discussion but the psychologists and psychiatrists still do not see eye-to-eye on the question of the psychologists' independent practice of psychotherapy. In the absence of any APA policy concerning relations with psychiatry, the Committee will apparently operate on the general policy that rational discussion is good, and good communication is necessary. William A. Hunt was re-elected chairman of the committee.

The Committee on Academic Freedom and Civil Liberties also raised broad policy issues. It submitted the following tentative principles for the Board, the Council and the membership to think about.

1. The APA affirms its loyalty to the United States¹ and to democratic institutions as guaranteed by the Constitution of this country; it further affirms its belief that free institutions, as represented by freedom of thought, freedom of speech, and freedom of assembly, are prerequisite to the proper functioning of intellectual endeavor in general and scientific inquiry in particular, and regards any danger to such free institutions or their unfettered operation as a threat to the objectives of this Association, viz., the advancement of psychology as a science, as a profession, and as a means of promoting human welfare.

¹ The APA has Canadian members also, and Foreign Affiliates. In this report obviously we speak only for U. S. citizens.

2. The psychologist is a citizen, and as a citizen he has rights guaranteed by the Constitution of the United States, and he should vigilantly defend these rights. He should recognize that citizenship implies responsibilities, and he should act professionally and as a citizen in a manner consonant with the democratic principles that endow him with his rights. In the exercising of his civil rights we believe that the individual should govern his conduct in relation to the institutions for which he works, and in relation to his fellow workers, so that an atmosphere of mutual trust may be engendered in which democratic principles best flourish.

3. When some issue concerns science generally or the psychological profession specifically, on a national scale, it may be appropriate for the APA to address a resolution to the President of the United States, the Congress, or other appropriate agencies.

4. When an individual psychologist believes himself to have become the victim of practices which are in violation of the principles set forth above, in such a way as to reduce his effectiveness as a psychologist, we believe that it is the duty of his professional organization to ascertain the facts in the case and to come to his defense if it appears that his rights as a psychologist have been abrogated.

5. When an individual case is brought to the attention of this committee, the following procedures are recommended:

- a. A preliminary fact-finding inquiry will be conducted by the chairman with the assistance of the Executive Secretary. This inquiry will involve the writing for information from both sides of the controversy.

- b. The findings of this preliminary inquiry will be digested and sent to the members of the committee for purposes of determining whether or not an investigating committee should be appointed.

- c. If the decision is against investigating, the parties to the controversy will be so informed and a confidential report will be made to the APA Board of Directors.

- d. If the decision is in favor of investigation, the facts will be reported to the APA Board of Directors with the recommendation that an *ad hoc* committee be appointed promptly and granted necessary funds.

The formulation of these principles again represents a move toward an officially articulated APA policy. And again the Board and Council have refused to take any precipitous action, deciding instead that these matters must be considered fully by the membership before crystallization occurs. Ernest R. Hilgard was continued as chairman of the Committee on Academic Freedom and Civil Liberties.

Although the Association appears to move with great care and deliberation toward the formulation of policy, it demonstrated at the Washington meeting that it can act with great dispatch on the basis of policies already adopted. The Association has a policy that it will not hold its conventions in settings where discrimination against any of our members is

practiced. There was discrimination in Washington. Very quickly the Association drew up and passed a resolution commending those hotels in which no discrimination was practiced but stating calmly that we would not meet again in Washington until there has been more progress toward equal treatment of minority groups. The resolution is quoted in full by the Recording Secretary (page 653). The action by the Association created quite a stir in the Washington and national press. The story of this whole incident, from its preparation to its release to the last clipping from editorial pages and the last violent letter, is a fascinating one. The Central Office hopes eventually to tell it to the membership.

THE BUILDING

The report of the Building Committee said that a building has been purchased. The committee was warmly commended and discharged.

The House Committee reported that it, in collaboration with the Board of Directors on one hand and an architect on the other, had gotten ahead with the job of remodeling and furnishing the building. (The problems of the House Committee and its method of attacking them are described in "Across the Secretary's Desk" in the August 1952 *American Psychologist*.) The Committee was given an expression of hearty appreciation and continued, under the chairmanship of Jerry W. Carter, Jr.

Also in connection with the building, the Board and Council voted (a) to increase the total budget for the project to \$240,000, (b) to aim at \$85,000 worth of voluntary contributions to pay for the building, (c) to establish a complete journal library in the building but not now budget anything for the stocking or furnishing of such a library, and (d) to elect a Committee on Fund Raising to pay off what we will owe on the project when it is finished. The latter Committee is asked to elect its own chairman and then to plan and execute a campaign for funds.

During the Washington meetings many members inspected the building and a number of them contributed or pledged money to the building fund. Others went home, counted their money, and sent in gifts or pledges. The Board of Directors gave a total of \$850.00 to the fund. Things are moving. But \$85,000 is a lot of money.

THE POLICY AND PLANNING BOARD STUDY

A major development for the APA, though not one requiring action at the recent meetings, is the

Policy and Planning Board's study of psychology as science and as an institution. The study has been described in the P & P Board's report in the October 1952 *American Psychologist*. The National Science Foundation has officially agreed to sponsor the study. The NSF-APA contract sets October 1, 1952 as a starting date. The project has now begun. The central steering committee for the project is chaired by Dael Wolfe, with Clarence Graham, Lyle Lanier, Robert MacLeod, Eliot Rodnick, M. Brewster Smith, and Robert Thorndike, members. Frank Beach is the new chairman of the Policy and Planning Board.

INTERNATIONAL RELATIONS

This year there was perhaps more APA concern with international relations in psychology than in any year in our recent history. The Committee on International Relations in Psychology reported considerable activity and correspondence concerning international scientific communication and cooperation. For the coming year the Council of Representatives elected to the committee a number of American psychologists abroad who are to serve as corresponding members and referred to the committee a number of specific matters involving international relations. It voted the Committee an enlarged budget, as a hint that it expects large accomplishments. The items referred to the Committee include (a) the possible publication, under the auspices of the State Department, of a psychological newsletter, (b) possible APA sponsorship of a journal to which foreign psychologists could contribute articles in English, and (c) the possible sponsorship of an Interamerican Psychological Society.

The interim committee on the 1954 International Congress reported on a meeting with a similar committee of the Canadian Psychological Association at which were outlined general plans for the joint CPA-APA sponsorship of the Montreal meeting of the International Congress of Psychology. The interim committee presented recommendations concerning the organization of the regular committee, which will work with the Canadians, on the actual arrangements for the Congress. The Council accepted these recommendations, elected a slate of nominees to be submitted to the executive committee of the International Union of Scientific Psychology for election to the CPA-APA committee, which will then become a committee of IUSP. This committee, in collaboration with foreign psychologists, will plan

the program, seek funds to support the travel of visitors from abroad, facilitate summer appointments and lectureships for distinguished foreign psychologists, and make the necessary local arrangements in Montreal.

These and several small actions concerning international matters are reported by the Recording Secretary. H. S. Langfeld continues as chairman of the committee. Dr. Langfeld will also continue to serve IUSP as its Secretary-General.

ADDITIONAL ITEMS

Public Relations

The Committee on Public Relations submitted a provocative report describing the kind and flavor of informational activities it judged appropriate for the APA. It recommended a number of concrete steps. It recommended that the Council grant \$2,000 to foster a plan to study systematically, through the cooperative effort of instructors of psychology classes, the public perception of psychology. The Board and Council turned this down on the grounds that such a study might be included in the Policy and Planning Board project. The Committee recommended that the APA secure the services of a full-time public information expert to conduct an informational and educational program. It outlined the sorts of projects such a person might execute. The Council voted a budget of \$5,000 for such a program as the Committee on Public Relations, the Central Office, and the Board of Directors might agree upon as good. The committee further recommended that volunteer monitoring committees be established to read regularly all the output of special media having large psychological content. The Council passed a motion permitting the committee to move in this direction but admonished against any attempts at present to "police" columnists or others. The monitoring committee should be oriented toward analysis rather than control.

The committee also reported on the public relation "experiment" conducted at the Washington meetings. This is also mentioned briefly in the Annual Report of the Executive Secretary (page 688).

It is clear that the APA is moving now toward active efforts in the field of public information. This area of effort is conflictful and one in which mistakes are easily made. Many members feel, however, that psychologists must become more concerned with public information and, further, that

psychologists have the ability to commit themselves with both integrity and effectiveness in their attempt to give the public information and to keep within rational bounds the hostility so easily aroused against any scientific or professional field that savors of the intellectual.

S. Rains Wallace replaces Donald T. Campbell as chairman of the Committee on Public Relations.

Directory of Psychological Service Centers

The report of the Recording Secretary records Council action concerning a Directory of Psychological Service Centers. During the summer President Hunt, at the Board's direction, appointed a subcommittee of the Council and asked for recommendations concerning the question, for some years confronting us, of an APA-sponsored directory of psychological service centers. This subcommittee (John G. Darley, chairman; Leonard W. Ferguson, Robert E. Harris, Theodore M. Newcomb, and T. Ernest Newland) presented strong recommendations that APA move toward positive action with respect to this matter. APA moved. A committee was appointed to draw up a concrete plan, much like the plan submitted by the subcommittee, to produce a directory. The tentative plan calls for some manner of sensible evaluation of service centers offering help with personal problems, with the evaluations being made by state psychological associations. The project is seen as one which should finance itself through fees paid for evaluation and through sale of the eventual directory.

Many will see this development as one equivalent in both complexity and significance to the establishment of ABEPP. And many will agree with the Council's subcommittee that the "task is organically related to the broad ethical and philosophical problems with which the APA has consciously chosen to deal." John G. Darley will chair the committee asked to draw up the working plans for the creation of the directory.

The "Royalty Fund"

In response to the report of the Committee on an APA Royalty Fund the Council voted to establish a separate corporation to be known as the "American Psychological Foundation," the Trustees of which are to be the seven most recent past presidents willing to serve. The Foundation will receive gifts from psychologists and others and disburse them in the advancement of psychology by support-

ing projects not ordinarily fostered by APA or other institutions. The Foundation will soon be in existence, properly possessed of Articles of Incorporation, Bylaws, and Trustees. Already several members of the Association have volunteered to contribute a percentage of royalties earned from the sale of psychological books.

The Convention Program

The Convention Program Committee reported that it had survived the job of planning the 1952 program but implied that future committees might not. The report raised serious questions about our present arrangements for conducting a program. This question led to the creation of an *ad hoc* committee to make firm recommendations soon about the conduct of the 1953 meetings and to formulate, before the March meeting of the Board, recommendations concerning the organization of future meetings. Launor F. Carter was elected as the 1953 chairman of the Program Committee. Cecil W. Mann, chairman of the 1951 committee, will serve as chairman of the new *ad hoc* committee.

Test Standards

The Committee on Test Standards reports that it plans to present at the 1953 meeting a set of standards expressing a considered consensus as to the "nature and form of the information which should be presented in a manual for a psychological test." The Committee published in the August 1952 *American Psychologist* a statement of its purpose and a set of tentative general recommendations. The Committee will continue for another year with its present membership and with Lee J. Cronbach continuing as chairman.

Relations with Social Work

The Committee on Relations with the Social Work Profession reported one meeting during the year and progress toward a joint psychology-social work study designed to discover, through the critical-incident technique, concrete information about mutual problems. This information will be the subject of a future joint conference. Malcolm G. Preston retires as chairman of the committee. The Council elected Howard Mitchell to replace him.

Audio-Visual Aids

The Committee on Audio-Visual Aids reported its main function to have been the selection of a pro-

gram of films for the annual meeting. The committee is not happy about its purpose. It asked for a clearer definition of its function. The Board and Council referred this matter back to the committee. The committee's recommendations concerning divisional selection of scientific films was referred to the *ad hoc* program committee. Its recommendations concerning an editor for film reviews in the *Psychological Bulletin* was referred to the Publications Board. Lester F. Beck is the new chairman of the committee, replacing James J. Gibson.

Questionnaires

The Committee on Questionnaires reported on its not very successful efforts to protect the membership from a flood of meaningless questionnaires and to assist in the formulation of questionnaires designed for distribution to psychologists. The committee was encouraged to get ahead rapidly with its reported plan to prepare a statement concerning both the technical and ethical problems involved in sending out questionnaires. Willis C. Schaefer continues as chairman of the committee.

Students

The Committee on Student Activities reported that with the tendency to raise the Association's membership standards, neither the committee nor the APA has much to do with students. The committee recommended that the APA do what it can to cooperate with Psi Chi in meeting the needs of students of psychology.

Manpower

The Committee on the Utilization of Manpower reported no meeting but a good deal of correspondence concerning the utilization of specialized manpower. The chairman of the committee, Leonard Carmichael, has been individually very active in this field. The committee operates, essentially, in a stand-by capacity.

Membership

The Membership Committee reported the election of 1,426 new Associates in 1952 and the rejection of 186 applicants for membership. The committee also reported on recommendations for revision of the membership application blank. In 1953 applicants will be asked to send to the Central Office the names of members who have known them and who can

report on their eligibility for Associateship. The Central Office will then write directly to these potential endorsers, asking for information. Such an arrangement will remove some embarrassment from and bring more objectivity to the process of endorsing applicants—particularly in the case of negative endorsements. To help cover the added expense of this procedure, all applicants will be charged a fee of \$2.00.

There was also much discussion during the meetings about procedures for electing Fellows. The new procedures, allowing for application by Associates at the end of four years of postdoctoral experience, will allow for a more thorough investigation of applicants by Divisions. The new arrangements are described briefly in the report of the Recording Secretary and will be soon communicated fully to all divisional officers and all applicants for Fellowship.

Psychology in Autobiography

The Committee on the History of Psychology in Autobiography reported that its job was done. It requested and was granted a discharge—with hearty thanks. Volume IV of *History of Psychology in Autobiography* has been produced and is available from the Clark University Press. The price is \$7.50.

Malpractice Insurance

In the spring the President appointed a special committee, with O. Hobart Mowrer, chairman, to study the proposition that APA might well facilitate the efforts of many members to secure insurance against suits alleging malpractice. The committee found the whole matter an exceedingly intricate one. Its report is published in full in this issue (page 677).

Representatives to Other Organizations

The Council received eight reports from APA representatives or groups of representatives to other organizations. Frank Geldard and Rensis Likert reported on continuing contact with the American Association for the Advancement of Science and on developments within that organization. The AAAS has progressed toward the erection of a new building in Washington, has stated a policy of devoting effort to increasing public understanding of science, and has used its influence in the attempt to modify the

McCarran Act in such a way as to make possible better international scientific communication.

S. S. Stevens reported vigorous activities in the Division of Anthropology and Psychology of the National Research Council. The Division has secured the services of a full-time executive secretary, has participated actively in the creation and progress of a Committee on Disaster Studies, and has facilitated the work of its Committees on Aviation Psychology, Child Development, International Relations, and Sensory Devices. The Committee on Aviation Psychology will not be continued for the coming year.

Otto Klineberg, Douglas McGregor, and Robert R. Sears reported that 39 individual psychologists had served during the year as officers, directors, committee or staff members of the Social Science Research Council. Of 37 SSRC grants or fellowships, seven went to psychologists. Of the 13 SSRC summer seminars held since 1950, seven have been concerned with psychological topics and have been composed mainly of psychologists. There can be no doubt that psychology is well and actively represented in the significant work of SSRC.

Herbert S. Conrad reported upon impending changes in the bylaws of the American Documentation Institute designed to increase the "vigor" and financial security of that organization. Harry Helson, chairman of the APA delegation to the Inter-Society Color Council, reported on a three-day meeting of the Council at which APA representatives participated in such a way as to inform other members of the Inter-Society Color Council of the contributions of psychology to problems of color. For the coming year, R. W. Burnham will serve as chairman of the APA delegation.

Sidney Newhall reported that the American Standards Association Committee Z58, Standards of Optics, after preparing Standards Z58.7.1-1951, Z58.7.2-1951 and Z58.7.3-1951, all having to do with the measurement and specification of color, has been inactive since 1952.

The APA representative to the World Federation of Mental Health, Gertrude Driscoll, reported an inability to attend the Fourth International Congress of Mental Health held in Mexico City in December 1951 and recommended that APA find ways of insuring that a representative attend future Congresses, either by appointing a delegate who can afford the travel or by supplying travel funds. Dr. Driscoll recommended that APA find ways to par-

ticipate more actively in the World Federation. J. Q. Holsopple, representative to the Groupement International pour la Coordination de la Psychiatrie et des Methodes Psychologiques, also reported an inability to finance a trip to the meeting of the Groupement and regards it as regrettable that the APA was not represented.

Salvatore Di Michael reported an increase in the working contacts between the APA and the National Society for Crippled Children and Adults.

A TERMINAL TRIVIUM: THE PRESIDENT'S BOW TIE

At their annual conventions psychologists do many things having no discernible bearing on either the business of the Association or the advancement of science. Many of these things, if described for the public, would demand very severe editing and perhaps even expurgation. There was one non-scientific, nonbusiness incident at the Washington meeting, however, that may deserve the space necessary to tell about it. The President forgot his black tie. He realized this at 7:15 on Labor Day evening. He was due to appear in tuxedoed splendor at 8:00 P.M. to deliver his address to the assembled membership. He telephoned a number of people, including various hotel employees, in the hope of getting a black bow tie. No results. At 7:31 he called the Executive Secretary who immediately volunteered to lend *his* black tie and wear a dark red one, which is prettier anyhow. The President was reluctant. The arrangement fell through—not because of presidential reluctance but because the Executive Secre-

tary had also forgotten *his* black tie(as well as his black socks). The deadline was approaching rapidly: 7:34. The president reported himself reconciled to appearing in a polka dot tie. Then various wives got busy on the problem. At 7:42 one of them went to the lobby and personally canvassed various hotel employees. No results. Then at 7:49 she saw a dark bow tie on a stranger standing idly in the mezzanine. She rushed to him and with convincing urgency asked, "Would you give up your tie for a good cause?" He ripped it off without a question and gave it to her. It turned out to have small orange polka dots. She rushed it to the Executive Secretary (by then 7:53), who took a bottle of Statler Hotel ink, laid out the tie on the *Washington Post* and did a job of dyeing. Success. A little damp but undistinguishable at a distance of 6 feet from a proper formal tie. A call to the President at 7:58. He had left his room. A rush to the Ballroom to save the President from having to appear in polka dots. He was by then attired in a fine, genuine black bow. Harold Seashore had apparently taken one off a waiter.

The tie once adorning the neck of a very agreeable person in the Statler lobby and once characterized by small orange dots, is now in the possession of the Executive Secretary and has no dots. Either the Executive Secretary or the President, depending on the point of view about responsibility, owes a tie to someone—to someone who may be a psychologist—or, for all anybody but himself knows, a Senator, a lobbyist, or the Mayor of Paducah on vacation.

PROCEEDINGS OF THE SIXTIETH ANNUAL BUSINESS MEETING OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., WASHINGTON, D. C.

SEPTEMBER 2 AND 4, 1952

REPORT OF THE RECORDING SECRETARY

DOROTHY C. ADKINS

The University of North Carolina

THE annual meeting of the Council of Representatives of the American Psychological Association was called to order at 9:25 A.M., September 2, 1952, by President J. McV. Hunt in the Statler Hotel, Washington, D. C. The first session of the meeting was recessed for lunch at 12:00, reconvened at 1:30 P.M., and adjourned at 5:00 P.M. The second session began at 9:15 A.M., was recessed for lunch from 12:00 to 1:30 P.M., and adjourned at 4:00 P.M. A roll call of representatives was taken and a quorum established. The Board of Directors met on August 30 from 9:00 A.M. to 5:00 P.M. and from 7:30 P.M. to 11:00 P.M., on August 31 from 9:00 A.M. to 7:30 P.M., and on September 3 from 8:00 A.M. to 1:30 P.M. for discussion of recommendations and preparation of the agenda.

A. REPORTS TO THE COUNCIL OF REPRESENTATIVES

1. The Council again voted to instruct the Executive Secretary to prepare for publication an over-all summary article on the business of this annual meeting as an alternative to publication of all board and committee reports. Certain specified exceptions to this procedure were made. As for the previous year, mimeographed copies of reports will be available to the membership upon request through the Executive Secretary, and bound sets will be permanently filed in the official archives of the Association.

2. It was voted to approve the minutes of the Council meetings of September 3-4, 1951, as printed in the *American Psychologist*, 1951, 6, 587-611.

3. It was voted to approve and order printed in the proceedings the report of the Recording Secretary on the meetings of the Board of Directors, March 20-23, 1952, and preceding interim actions and the report of the Treasurer.

4. The Board of Directors reported the following additional interim actions:

a. Interim actions of the Board of Directors following the March meeting:

(1) Approval of an additional budget of \$300 for the Publications Board.

(2) Approval of a budget of \$50 for the Division of Counseling and Guidance to cover publication costs of reports of Conference on Standards of Training in Counseling and Guidance.

(3) Approval of a budget of \$250 for the *Ad Hoc* Committee for Planning the International Congress.

(4) Approval of renting space in the new APA building to the American Personnel and Guidance Association.

(5) Selection of the following persons, from a list submitted by the Divisions on the Teaching of Psychology and Industrial and Business Psychology, as a panel of names to be submitted to USAFI as possible consultants on the selection of text materials in industrial psychology at the college sophomore level: P. S. Achilles, R. M. Bellows, C. W. Brown, H. E. Burt, W. J. E. Crissy, E. E. Cureton, J. L. Finan, P. M. Fitts, T. W. Harrell, Paul Horst, R. W. Husband, T. A. Jackson, R. A. Katzell, G. F. Kuder, R. A. McFarland, Douglas McGregor, L. C. Mead, B. V. Moore, A. T. Poffenberger, E. T. Raney, H. H. Remmers, C. L. Shartle, Ross Stagner, M. S. Viteles, Alvin Zander.

(6) The appointment of Frank Beach to write an article for the National Society for Medical Research on the use of animals in psychological research. It was agreed to request the Committee on Precautions in Animal Experimentation to review this article.

b. Interim actions of the President:

(1) Appointment of the following persons to the Committee on Malpractice Insurance: O. Hobart Mowrer (chairman), Rose G. Anderson, Irwin A. Berg, Albert Ellis, Harriet E. O'Shea, and Wallace H. Wulfeck.

(2) Appointment of the following Council members to the *Ad Hoc* Committee on the Publication of a Directory of Psychological Service Centers: John G. Darley (chairman), Leonard W. Ferguson, Robert E. Harris, Theodore M. Newcomb, and T. Ernest Newland.

(3) Appointment of Edwin B. Newman, Irwin A. Berg, and Charles N. Cofer to a temporary committee on fund raising for the new building.

5. It was voted to receive with thanks, but not to order printed, reports from the following:

Convention Program Committee

Committee on Scientific and Professional Ethics and Conduct

Election Committee

Committee on Student Activities

Committee on Public Relations

Membership Committee

Committee on Audio-Visual Aids

Committee on the Relation of Psychology to Psychiatry

Ad Hoc Committee on Relations with the Medical Profession

Advisory Committee on Legislative Matters

Committee on International Relations in Psychology

Committee on Relations with the Social Work Profession

Committee on History of Psychology in Autobiography

Committee on Test Standards

Education and Training Board

Committee on Questionnaires

Committee on Royalties Contributed to the APA

Committee on the Utilization of Manpower

Conference of State Psychological Associations

Committee on Academic Freedom and Conditions of Employment

Publications Board

Finance Committee

Board of Directors Subcommittee on Procedures for Election of Fellows (which the Board has discharged with commendation and thanks)

The APA Advisory Editors to the *Journal of Educational Psychology*

The Executive Secretary on the *American Psychologist*

The APA representatives to the following other organizations:

American Association for the Advancement of Science
National Research Council Division of Anthropology and Psychology

Social Science Research Council

American Documentation Institute

Inter-Society Color Council

American Standards Association Committee Z58 on Standardization of Optics

World Federation for Mental Health

Groupeement International pour la Coordination de la Psychiatrie et des Methodes Psychologiques

National Society for Crippled Children and Adults

6. It was voted to receive with thanks the report of the Council of Editors, which is printed at the end of the Proceedings.

7. It was voted to receive with thanks the report of the Executive Secretary on APA publications, the essence of which was published in "Across the Secretary's Desk" in the September 1952 *American Psychologist*.

8. It was voted to receive with commendation the report of the Building Committee.

9. It was voted to receive the report of the House Committee with commendation and appreciation.

10. It was voted to receive with commendation and thanks the report of the Committee on Malpractice Insurance and to order it printed in the *American Psychologist* after appropriate editorial revision by the Chairman of the Committee. The Committee will be continued with the same members.

11. It was voted to receive the report of the Committee on Ethical Standards for Psychology with special commendation for outstanding performance of a difficult task that represents a contribution to the methods of human science as well as a useful product for the Association.

12. It was voted to receive the report of the *Ad Hoc* Committee of the Council on the Publication of a Directory of Psychological Service Centers with thanks and special commendation.

13. It was voted to receive the report of the Interim Committee on the 1954 International Congress with thanks for a very thoughtful report.

14. It was voted to commend Herbert S. Langfeld for his activities in the field of international relations in psychology and for his strong stand in favoring independent status for psychology in the International Council of Scientific Unions.

15. It was voted to acknowledge with thanks the report of the American Board of Examiners in Professional Psychology.

16. It was voted to discharge with thanks the following committees: Committee on History of Psychology in Autobiography; Building Committee;

and Interim Committee on the 1954 International Congress.

17. It was voted to continue the Committee on the Utilization of Manpower with the same members as for the preceding year.

B. OTHER ACTIONS RELATING TO COMMITTEE AND BOARD REPORTS

1. The Council approved the following actions related to the work of the Committee on Ethical Standards for Psychology, which were recommended or concurred in by that Committee:

a. That the title of Volume I be "Ethical Standards for Psychologists, A Summary of Ethical Principles."

b. That the title of Volume II be "Ethical Standards for Psychologists."

c. That "Ethical Standards for Psychologists" be adopted as official policy of the APA for a trial period of three years for the guidance of members and of ethics committees.

d. That, following the 1954 meeting, "Ethical Standards for Psychologists" be revised and submitted to the membership for voting, principle by principle, and then placed on the agenda for final Council action in 1955.

e. That the provisional character of both volumes be stated specifically in the volumes.

f. That "Ethical Standards for Psychologists, A Summary of Ethical Principles" be revised now, with the assistance of the APA's Public Information Officer, and published for the information of the members and others.

g. That paper-bound copies of both volumes be distributed to the membership without charge.

h. That the Central Office be authorized to sell additional copies of either volume to members or nonmembers.

i. That the Education and Training Board be encouraged to urge the study of "Ethical Standards for Psychologists" in graduate training programs.

j. That the Rockefeller Foundation be notified of the completion of the project and thanked for its assistance.

2. The attention of the Council was directed to the tentative statement of principles in the report of the Committee on Academic Freedom and Conditions of Employment.

3. The report of the *Ad Hoc* Committee on the Publication of a Directory of Psychological Service

Centers offered a number of specific recommendations on proceeding with the preparation of a directory. The Council voted to discharge its *ad hoc* committee, to receive its report with thanks, and to refer the report to a new Committee on Directory of Psychological Service Centers with an expression of general approval of the recommendations made. One recommendation of the Committee (the second) was to the effect that the plan should be limited to certain types of agencies which charge fees. The Council voted that this restriction should be removed from the recommendation in order to give the new committee more freedom in considering the problem.

4. The Council approved seven recommendations in a memorandum of August 15, 1952, from the Education and Training Board on "The Request of the Veterans Administration for an Approved List of Universities which Provide Adequate Doctoral Training in Psychology for VA Counseling Psychologists." The recommendations, which were concurred in by the Executive Committee of the Division of Counseling and Guidance, deal with means for early action to accede to this request.

5. It was reported that the Policy and Planning Board, on the basis of the Council's approval in 1951 of its general plans to solicit funds for the support of an extensive study of psychology as science and as profession, has requested funds from the National Science Foundation. The outlines of the study have been agreed upon and tentative arrangements made to begin the project soon.

6. The Council approved the establishment of a new *ad hoc* committee to review alternative program plans for the APA, to report by November on a plan for the 1953 program, and to report before the March 1953 Board meeting on general APA program policies. The Committee is to consist of the chairmen of the last two APA Convention Program Committees and the members of the 1952-53 Convention Program Committee, with the chairmen of the 1951-52 program committees of all regional psychological associations as corresponding members. The Council tabled the recommendations of the 1951-52 Convention Program Committee and referred them to the new *ad hoc* committee. The Council also referred to this committee recommendations of the Committee on Audio-Visual Aids that divisional program committees be asked to accept and consider abstracts for film presentations and

that consideration be given to need for a policy for permitting commercial distributors to show their films independently of the program selections.

7. The Council requested the Advisory Committee on Legislative Matters to study the many issues involved in legislation for psychologists and, in collaboration with the editor of the *American Psychologist*, to develop a symposium for publication in that journal on the relative merits of licensing and certification.

8. The Council voted to instruct the *Ad Hoc* Committee on Relations with the Medical Profession to incorporate any desirable changes in its report resulting from program sessions at the 1952 convention and discussion at the 1952 Council meeting and to submit a revised report to the Board and the Council for mail vote, item by item, provided that ultimately the revised report go to the full membership for a vote. The Council deferred action on the matter of favoring certification or licensing for psychologists until that issue is presented in the revised report. The Council requested this Committee, at the earliest possible date, to recommend to the Board of Directors a more appropriate title for the Committee.

9. The Council instructed the Committee on Student Activities to explore with Psi Chi ways in which the APA can assist it and to remind Psi Chi of the privilege of subscription to APA journals through the Student Journal Group. The Council also instructed the Executive Secretary to have information concerning Psi Chi sent to the chairmen of all university departments of psychology.

10. The Council authorized the Committee on Public Relations to appoint, on an experimental basis, one or more panels of observers to be responsible for surveying and reviewing mass publication media in relation to psychology. This review function is definitely to have no aspect of control.

11. The Executive Secretary was empowered by the Council to explore the possibility of getting funds to conduct a study, with the Committee on Public Relations, of the effects of the APA's public information program.

12. The Council referred back to the Committee on Audio-Visual Aids a question as to whether the Council wanted it to maintain only a standby function, with a request for suggestions as to appropriate functions and as to the budget they would entail.

13. The Council instructed the Committee on

Questionnaires to formulate a statement on appropriate rules for the construction of questionnaires.

C. PUBLICATIONS

1. It was voted to approve in principle the policy of spreading publication costs in APA journals equally among all authors in all journals as opposed to the present practice of charges for special composition. It was voted that no changes in the present practice be made now, but that the matter be brought before the Council next year.

2. It was voted to return at once to the practice of providing 50 free reprints to authors of articles in APA journals and to refund payments to those few authors who have paid for reprints within the last year.

3. It was voted to approve a recommendation of the Publications Board that no new journal in the field of human engineering be initiated at this time.

4. It was voted to approve a recommendation of the Publications Board to establish a billet for a full-time associate editor of *Psychological Abstracts*.

5. The Council approved the following page allocations for APA journals for 1953, in accordance with a recommendation of the Publications Board:

<i>American Psychologist</i>	200 plus official publications
<i>Journal of Applied Psychology</i>	432
<i>Journal of Abnormal and Social Psychology</i>	544
<i>Journal of Comparative and Physiological Psychology</i>	560
<i>Journal of Consulting Psychology</i>	480
<i>Journal of Experimental Psychology</i>	800
<i>Psychological Abstracts</i>	912
<i>Psychological Bulletin</i>	560
<i>Psychological Monographs</i>	600
<i>Psychological Review</i>	400

6. The Council voted to continue for five more years the present arrangement of the APA with respect to the *Journal of Educational Psychology*.

7. The Council referred to the Publications Board for study, with assistance from the Central Office staff, matters related to accepting proposed contracts with agencies sponsoring psychological research for early publication in APA journals, and to calculating and charging full costs of early publication. The Council voted that it did not object to the principle of charging APA members as individuals less than institutions for publication costs.

8. The Council referred to the Publications Board for recommendation the offer of the editor and owner of *Psychological Book Previews* to give that journal to the APA, with the expectation that the Board of Directors will take mail action.

9. It was reported to the Council that the Board of Directors has directed the Executive Secretary to explore the possibility of reproducing by a photo-offset process articles by analysts in the 1940 *Journal of Abnormal and Social Psychology*, as well as the possibility of similarly reproducing all out-of-print APA journals.

10. It was reported to the Council that the Board of Directors has referred back to the Committee on International Relations in Psychology a proposal that the APA request that a Psychological News Letter be initiated through State Department funds.

11. It was reported to the Council that the Board of Directors has referred to the Publications Board and to the Committee on International Relations in Psychology the important problem of providing publication outlets to European psychologists.

12. The Council voted to send two sets of each of the APA journals from 1941 to 1946, inclusive, to the Japanese Psychological Association in response to a request and as a token of our scientific good will.

13. The Council referred to the Publications Board a recommendation from the Committee on Audio-Visual Aids that steps be taken to formalize the activity of arranging for reviews of films in the *Psychological Bulletin* and designating an editor of film reviews.

14. The Council approved a new type of non-biographical directory based on the Flexoprint system, to be issued in August, 1953 and annually thereafter in August, with the expectation of a biographical directory at intervals of five years.

D. FINANCES AND BUDGET

1. The Council voted to approve the following budget for 1953:

APA BUDGET FOR 1953

<i>Income</i>	
DUES	\$156,375.00
Fellows (@ 16.50)	\$ 24,800.00
Associates (@ 11.50 and 16.50) ..	116,125.00
Foreign Affiliates (@ 4.00)	300.00
Divisional dues	13,450.00
Prior year dues and back-order fees	1,700.00

SUBSCRIPTIONS	143,866.00
Student Journal Group Fees (@ 8.00)	10,800.00
Member and student subscriptions	
Abnormal	7,465.00
Applied	2,691.00
Comparative	1,078.00
Consulting	6,195.00
Experimental	2,825.00
Monographs	2,040.00
Review	5,600.00
Abstracts	301.00
Bulletin	1,700.00
AJP	850.00
Club A	29,000.00
Nonmember subscriptions	
American Psychologist	5,544.00
Abnormal	9,765.00
Applied	10,210.00
Comparative	3,720.00
Consulting	6,438.00
Experimental	10,950.00
Abstracts	10,800.00
Bulletin	6,480.00
Monographs	3,150.00
Review	6,264.00
OTHER PUBLICATION INCOME	50,950.00
Reprints	6,000.00
Extra and prior publication	15,200.00
Single and back issues	14,000.00
Monographs authors	2,750.00
Advertising	13,000.00
MISCELLANEOUS INCOME	16,500.00
Application fees	2,800.00
Interest on investments	1,000.00
Use of addressograph	1,400.00
Annual meeting	3,000.00
Employment Bulletin	1,200.00
Income from rent	5,000.00
Conf. State Psychological Assns.	1,500.00
Miscellaneous income	600.00
TOTAL INCOME	\$367,691.00

Expenses

PUBLICATION EXPENSE	\$249,815.00
Printing	
American Psychologist	\$ 29,400.00
Abnormal	14,950.00
Applied	9,240.00
Comparative	8,400.00
Consulting	9,450.00
Experimental	15,450.00
Abstracts	33,600.00
Bulletin	14,175.00
Monographs	12,600.00
Review	9,500.00
Directory	12,000.00
Ethical Standards	8,000.00

Purchase of AJP subscriptions ..	3,750.00	
Reprints	9,000.00	
Editorial stipends	5,100.00	
Abstracts office expense		
Salaries	7,400.00	
Abstracters and translators ...	500.00	
Supplies and miscellaneous ...	800.00	
APA office publication expenses		
Salaries	42,000.00	
Supplies and miscellaneous ...	4,500.00	
BOARDS AND COMMITTEES		33,350.00
Board of Directors	1,750.00	
Council of Editors	1,000.00	
Policy and Planning Board	3,000.00	
Publications Board	1,000.00	
Finance	500.00	
Program	500.00	
Scientific and Professional Ethics	750.00	
Public Relations	300.00	
Membership	300.00	
Audio-Visual Aids	250.00	
Relations with Psychiatry	500.00	
International Relations	1,200.00	
Ethical Standards	200.00	
Relations with Social Work ...	300.00	
Academic Freedom	500.00	
Test Standards	2,250.00	
Education and Training Board ..	10,000.00	
Relations with Medical Profes-		
sion	750.00	
House Committee	300.00	
Legislative Matters	300.00	
<i>Ad Hoc</i> Committee on Program		
Policy	500.00	
Planning International Congress	3,500.00	
Fund Raising for New APA		
Building	1,000.00	
ABEPP	2,700.00	
GENERAL APA ACTIVITIES		63,130.00
Dues to Divisions	6,000.00	
Recording Secretary	400.00	
Annual meeting	1,700.00	
Annual election	2,000.00	
Professional services	2,000.00	
Public relations	5,000.00	
Insurance	3,000.00	
Central Office		
Salaries	32,430.00	
Conf. State Psychol. Assns. ..	3,000.00	
Supplies and miscellaneous ...	5,000.00	
Travel, Exec. Sec. and Central		
Office	2,000.00	
Memberships and contributions .	600.00	
BUILDING EXPENSE *		13,700.00
Upkeep	1,000.00	
Utilities	3,500.00	
Janitor	2,500.00	

* Will be allocated between Central Office and publication office expenses.

Depreciation	5,000.00
Taxes	1,700.00
CONTINGENCY FUND	3,000.00
RESERVE FUND	15,000.00
TOTAL EXPENSES	\$377,995.00
DEFICIT	\$ 10,304.00

2. The Council budgeted \$2,700 to be made available upon call to the American Board of Examiners in Professional Psychology for the year 1953. The Council voted to commend ABEPP for calling its anticipated financial problems to the attention of the APA in advance and to request ABEPP to explore various means of increasing its revenues and to report to the Board of Directors at its March 1953 meeting.

3. The Council voted not to appropriate at this time \$2,000 requested by the Committee on Public Relations for the pretesting and code development for a manual and survey schedule dealing with public attitudes toward psychology, since these functions are within the scope of current plans of the Policy and Planning Board.

4. The Council approved allocation of \$5,000 for the immediate implementation in the Central Office of a public information service to include educational and informational activities.

5. The Board of Directors reported to the Council that it has approved a total budget of \$240,000 for purchasing, remodeling, furnishing, and moving to the new headquarters building of the Association.

6. The Council voted to authorize the Board of Directors to empower the Treasurer and the Executive Secretary to borrow up to \$85,000 for the purpose of completing payments on the new building, by whatever arrangements appear to be most economical.

7. The Council voted to announce that no special assessment of the membership to complete payments for the new building is contemplated.

8. It was reported to the Council that the Board of Directors has directed the Executive Secretary to continue attempts to get the new building exempt from real estate taxes.

9. The Council voted to accept an appropriation of not to exceed \$1,500 for the coming year from the Conference of State Psychological Associations in partial support of the position of Technical Aide to the Conference in the APA Central Office. The Council approved a recommendation of the Conference urging the continuance of the position of half-time technical aide.

10. The Council voted that, beginning in 1953, dues for all members, both Associates and Fellows, will be \$17.50 per year, except that, for their first five years of membership, members shall be billed at \$12.50 per year.

11. The Council accepted with great thanks gifts from the Eastern Psychological Association of \$200 to support the appearance of the Central Office Placement Officer at regional meetings and of \$200 to assist in preparation of news releases on scientific papers presented at psychological meetings.

12. The Council approved requests to cover budget deficits of \$245.07 for the Publications Board and of \$773.91 for the Policy and Planning Board.

13. It was reported to the Council that the U. S. Public Health Service has approved a grant of \$15,000 for the Education and Training Board for the fiscal year beginning July 1, 1952.

14. It was reported to the Council that the Board of Directors has instructed the Executive Secretary to explore available types of insurance to protect an association in the event of legal suits by reason of actions of employees or representatives of the association in connection with their work for the association.

15. The Council deferred action on the request of the Division on Childhood and Adolescence that the APA contribute \$200 to the National Midcentury Committee for Children and Youth, Inc., a private organization established to carry on the work of the Midcentury White House Conference on Children and Youth.

16. The Council directed the Education and Training Board to explore possibilities of outside support for its activities and to consider the problems of long-term financing.

17. The Council approved the last seven ex-presidents of the APA who are willing to serve as charter trustees of a corporation to administer funds contributed to the APA from royalties and other resources, and the establishment of a separate corporation to be known as "The American Psychological Foundation" to receive gifts of any amount from psychologists and others. The Council voted that the prospective trustees should serve as an informal committee to take the necessary steps in reviewing articles of incorporation and other steps leading to and resulting in incorporation. The prospective trustees were instructed to present proposed articles of incorporation and other plans leading to incor-

poration to the Board and Council for mail suggestions, with the Board being delegated authority to act.

18. It was reported that, subject to veto by the Zoning Board of the District of Columbia, the Board of Directors has approved a three-year contract with the American Personnel and Guidance Association for the rental of part of the new APA building at an annual rental of \$3,000 as a substitute for the one-year contract previously approved.

E. MEMBERSHIP STANDARDS

1. The Council approved a recommendation of the Board of Directors Subcommittee on Procedures for Election of Fellows that duplicate files of all Division bylaws be kept in the Central Office of the Association and that the Central Office supply copies of appropriate Division bylaws to newly elected officers of divisions which so request.

2. The Council approved a recommendation of the Board of Directors Subcommittee on Procedures for Election of Fellows to request the Policy and Planning Board to study Division bylaws, with a view to assisting divisions in achieving desirable uniformity in terminology and policies.

3. The Council adopted the following new procedures for the election of Fellows:

a. Each Associate who applies for election to Fellowship shall apply on a uniform application blank not later than October first. The application blanks shall contain information relevant to the attainment of the minimum standards for Fellowship including (1) evidence of the possession of a doctoral degree based in part on a psychological dissertation with the title and a very brief synopsis of the dissertation; (2) a chronological summary of all experience subsequent to the Bachelor's degree; (3) a list of the applicant's publications in psychology; and (4) the names and addresses of not fewer than two sponsors or endorsers who shall be Fellows of the APA. A division may require additional information if it desires. The application blank shall be submitted at least in duplicate, one copy to be transmitted to the Central Office for the use of the APA Membership Committee and Board of Directors, and one or more copies, as the division may require, to be transmitted to the division secretary for the use of the division.

b. A list of such applicants for Fellowship shall be published in the *American Psychologist*, ordinarily in the December issue, with an invitation to

members to transmit information concerning qualifications of the applicants to the divisions and to the APA Membership Committee.

c. In order that the revised application procedure shall not increase the minimum requirement of five years of professional experience, divisions are authorized, if they so desire, to accept applications for Fellowship from such applicants who will have completed five years of experience by the July first next following the date of application.

d. Such applicants nominated by the divisions and approved by the APA Membership Committee and Board of Directors shall be nominated to the Council for election as Fellows at the annual meeting following their application.

e. The revised procedure shall take effect with the receipt of applications for Fellowship by October 1, 1953, for action in September, 1954.

f. As an interim procedure for 1953, a list of applicants for election to Fellowship status and their sponsors shall be posted conspicuously at the time and place of the annual meeting. Members having any questions or comments concerning the qualifications of applicants shall be invited to communicate with the Board of Directors.

4. In accordance with a recommendation of the Policy and Planning Board and the Board of Directors, the Council rejected a proposal made by the Division of General Psychology in 1951 for the automatic assignment to that division of all Associates who are not members of a division and who within a year have not expressed a preference not to affiliate with that division.

5. The Council voted that the application blank for Associate membership be revised to require the applicant to list a number of psychologists who know him well, that the Central Office solicit endorsements directly from the endorsers, and that a fee of \$2.00 be collected from the applicant to apply toward the cost of the application process.

F. FUTURE APA MEETINGS

1. It was reported that the 1953 meeting will be at Michigan State College, September 4-9; the 1954 meeting in the Penn Zone Hotels in New York City, September 3-8.

2. The Council voted that, if a survey reveals that accommodations will be adequate, the 1955 meeting be held in San Francisco, with September 2-7 as preferred dates and August 27-September 3 accept-

able as a second choice as to time. If a meeting in San Francisco is not feasible, the Council approved Los Angeles as a second choice and Cleveland as a third choice.

G. AFFILIATIONS

1. The Council approved the recommendation of the Conference of State Psychological Associations to approve for affiliation with the APA and as members of the Conference of State Psychological Associations the psychological associations of Alabama, Oregon, Utah, and West Virginia.

H. MISCELLANEOUS

1. The Council voted to reserve space in the new APA building for a psychological journal library and to place in this space such sets of journals as the APA is able to acquire now, with the aim of eventually having a complete library of psychological journals.

2. It was reported that the Board of Directors had tabled action on the question of establishing a psychological museum in the APA building.

3. The Council referred to the Committee on International Relations in Psychology a request from Dr. Werner Wolff for whatever support the APA can give in sponsoring The Interamerican Society of Psychology, an organization whose primary aim would be to assist with the development of psychological science in Latin American countries.

4. The Council referred to the Advisory Committee on Legislative Matters the question of APA involvement in such questions as a court trial relating to whether or not fees paid to a psychologist for psychotherapy are deductible on income tax returns.

5. The Australian Branch of the British Psychological Society has transmitted to the American Psychological Association the following resolution: "That the Australian Branch of the British Psychological Society views with concern what appear to have been recent attacks on academic freedom and wishes to place on record its firm support for the principle of freedom in pursuit of disinterested inquiry. That this be communicated to the American Psychological Association as evidence of support for their stand on academic freedom." It was reported to the Council that the Board of Directors had instructed the President to acknowledge formally the receipt of this resolution, including a statement of the AAAS resolution on academic freedom and of the APA's endorsement of it.

6. The President reported the receipt of the following telegram from the World Federation for Mental Health: "Executive Board and members annual meeting in Brussels send every possible good wish your meeting. Sorry you are not all here."

7. The Council adopted the following resolution, directed that it be read to the membership, and directed the President and Executive Secretary to make adequate public release of information on this action:

The American Psychological Association has a policy of not holding its annual meetings in places where hotels, restaurants, and public meeting-places practice discrimination against minority groups.

After investigation of leading hotels in the national capital, the Association received assurances from eight leading hotels that all members of the Association would be accorded equal treatment, and we therefore scheduled our 1952 meeting in Washington, bringing five thousand members to the city.

Our Association would like to indicate its complete satisfaction with the restaurants and facilities directly operated by the two hotels where sessions have been meeting—the Statler and the Mayflower. They have been democratic and exemplary in treatment of our members. In addition, the other hotels—the Ambassador, Burlington, Lee House, Raleigh, Willard, and the Roger Smith—which reserved rooms for our members after they had been informed of our policy have been most cooperative, as have the overwhelming majority of Washingtonians with whom we have come in contact.

But this week we have learned of several unfortunate incidents which have embarrassed some of our members outside these hotel facilities. It is with great regret, therefore, that we are making public what has been reported to officials of the Association concerning the effects of discrimination and embarrassment upon the conduct of the meeting. We have appreciated the friendly hospitality and cultural facilities offered us in the nation's capital, but the incidents make clear to us that we cannot hold a meeting and accomplish our business, which goes on in and out of regularly-scheduled scientific sessions, in a city where so many public places practice discriminatory policies.

This should not be taken to belittle the very real progress Washington is making in solving problems which we know cannot be solved overnight. But, for ourselves, we do not feel that we can hold meetings here again until additional progress has been made towards democratic treatment of minority groups.

8. The Council concurred in the following resolution adopted unanimously by the Board: "The Board of Directors of the American Psychological Association expresses its deep appreciation for the exceptionally meritorious services of Dr. Fillmore H. Sanford, the Executive Secretary of the APA, and of the unusually able staff of the Central Office

not only in accomplishing the routine work of the Association with dispatch but also in achieving definitive progress toward advancing the frontiers of psychology as a profession and as a science."

9. The Council expressed its great satisfaction and appreciation for the devotion and wisdom of the officers and the Board of Directors of the APA in conducting the affairs of the Association.

10. The Council extended a vote of thanks to Dr. Sherman Ross, the Convention Manager, and to the Committee on Local Arrangements for their effective contribution to the success of the Sixtieth Annual Meeting.

I. ELECTIONS

1. It was reported that O. Hobart Mowrer had been elected President-elect. The Council voted that in the future the results of the election for President-elect be announced as soon as possible in the *American Psychologist* and be posted conspicuously near the Registration Desk at the annual meetings.

2. It was reported that the Council had elected by mail ballot Paul R. Farnsworth and Nicholas Hobbs as members of the Board of Directors for the term 1952-55.

3. The Council elected Lee J. Cronbach as a member of the Board of Directors to fill the unexpired term of O. Hobart Mowrer (that is, for the term 1952-54) from among the four unelected nominees in the August 1952 mail election of Board members.

4. The Council re-elected Carroll L. Shartle as Treasurer for the term 1952-57.

5. The Council elected Anne Anastasi as Recording Secretary for the term 1952-55.

6. The Council voted to reappoint Fillmore H. Sanford as Executive Secretary of the APA for a three-year term beginning September, 1953.

7. The Council voted that the following persons be nominated for membership on the Board of Trustees of the American Board of Examiners in Professional Psychology and that these nominations stand for the year 1952-53:

Reign H. Bittner
Edward S. Bordin
Paul S. Burnham
Stanley G. Estes
Leonard W. Ferguson
Frank M. Fletcher, Jr.
Stephen Habbe
Albert J. Harris

Melvin S. Hattwick
Ernest R. Hilgard
Carl I. Hovland
Francis W. Irwin
Clifford E. Jurgensen
Raymond A. Katzell
George A. Kelly
Donald G. Marquis

Boyd R. McCandless
William McGehee
Theodore M. Newcomb
Jay L. Otis
Anne Roe

Carl R. Rogers
Edward A. Rundquist
Carleton F. Scofield
Carroll L. Shartle
Robert A. Young

Committee on Directory
of Psychological Serv-
ice Centers

Jerry W. Carter, Jr.
Nathan Kohn, Jr.
Julian B. Rotter
Clare W. Thompson
C. Gilbert Wrenn

8. The Council elected Theodore M. Newcomb as editor of *Psychological Review* for a six-year term ending December 31, 1959.

9. It was reported that the Council had elected by mail ballot the following persons as new members of APA boards and committees:

Policy and Planning Board	Dorothy C. Adkins (1952-55) Harry F. Harlow (1952-55) Dael Wolfe (1952-55)
Publications Board	J. McV. Hunt (1952-55) William A. Hunt (1952-55) Paul E. Meehl (1952-55)
Finance Committee	Leonard W. Ferguson (1952-53) John W. Gardner (1952-55) George G. Thompson (1952-55)
Convention Program Committee	
Committee on Scientific and Professional Ethics and Conduct	Marion A. Bills (1952-57)
Committee on Student Activities	Edgar L. Lowell (1952-55) Bonnie B. Tyler (1952-55)
Committee on Public Relations	Glen Finch (1952-55)
Committee on Precautions in Animal Experimentation	Richard L. Solomon
Committee on International Relations in Psychology	Otto Klineberg (1952-55) Donald G. Marquis (1952-55) Edwin B. Newman (1952-54)
Education and Training Board:	
Members-at-large	Frank A. Geldard (1952-55) George A. Kelly (1952-55) Neil R. Bartlett (1952-55) Thomas Gordon (1952-55) James H. Elder (1952-55) Louis Long (1952-55) Clare W. Thompson (1952-55)
Committee on Undergraduate Education	
Committee on Subdoctoral Education	
Committee on Practicum Training	
Committee on Doctoral Education	Allen L. Edwards (1952-55) Arthur W. Melton (1952-55) Victor C. Raimy (1952-55) Eliot H. Rodnick (1952-55)

10. The following persons were elected by the Council as members of APA committees:

Committee on Academic Freedom and Conditions of Employment	C. Roger Myers (1952-57)
Education and Training Board Committee on Postdoctoral Education	Joseph M. Bobbitt (1952-53) Ronald Lippitt (1952-53) Neal E. Miller (1952-53) Joseph Zubin (1952-53)

11. The Council nominated from the floor a slate of twelve persons for a newly created Committee on Fund Raising for the APA Building and elected the following five persons: George K. Bennett, Irwin A. Berg, John W. Gardner, Ernest R. Hilgard, and Wallace H. Wulfeck. The Council empowered this Committee to elect its own chairman.

12. It was reported that the following persons, recommended by the Board of Directors, had been approved by the Council on mail ballot as members of APA boards and committees:

Membership Committee	O. Hobart Mowrer (1952-55)
Committee on Precautions in Animal Experimentation	William O. Jenkins Austin H. Riesen
Committee on Audio-Visual Aids	Robert Hoppock Milton F. Metfessel
Committee on International Relations in Psychology	Robert B. MacLeod (1952-53) Robert M. Yerkes (1952-53) Herbert S. Langfeld (1952-54)
Corresponding members	Leo P. Crespi (Germany) Clark L. Hosmer (France) Eugene Jacobson (Norway) Roger W. Russell (England) Maurice E. Troyer (Japan)
Education and Training Board:	
Members-at-large	Stuart W. Cook (1952-53) Donald B. Lindsley (1952-53) E. Lowell Kelly (1952-54) Clifford T. Morgan (1952-54) Bruce V. Moore (1952-53)
Executive Officer and ex-officio member of Board	
Committee on Undergraduate Education	Claude E. Buxton (1952-53) Robert H. Knapp (1952-53) Wilbert J. McKeachie (1952-54) Eleanor O. Miller (1952-54)
Committee on Subdoctoral Education	Elizabeth Duffy (1952-53) Fred McKinney (1952-53) George S. Speer (1952-53) Ralph F. Berdie (1952-54) Milton A. Saffir (1952-54)
Committee on Practicum Training	Karl F. Heiser (1952-53) Donald E. Super (1952-53) Roy Brener (1952-54) Isabelle V. Kendig (1952-54)
Committee on Doctoral Education	Arthur L. Benton (1952-53) Saul Rosenzweig (1952-53) Delos D. Wickens (1952-53) C. Gilbert Wrenn (1952-53) Edward S. Bordin (1952-54)

Committee on Questionnaires

House Committee

Richard S. Crutchfield (1952-54)
 Bruce V. Moore (1952-54)
 Harold Schlosberg (1952-54)
 Ray C. Hackman
 James Q. Holsopple
 Willis C. Schaefer
 Jerry W. Carter, Jr.
 Thelma Hunt
 Harry J. Older
 Fillmore H. Sanford

13. The following persons, recommended by the Board of Directors, were approved by the Council as members of APA committees:

Committee on Scientific and Professional Ethics and Conduct

Gilbert J. Rich (1952-53)*

Committee on the Relation of Psychology to Psychiatry

Joseph M. Bobbitt
 John G. Darley
 Edward I. Strongin
 Richard Wittenborn

Committee on Ethical Standards for Psychology

Charles C. Gibbons (1952-55)
 Lloyd G. Humphreys (1952-55)
 Charles A. Weisgerber (1952-55)
 Herbert J. Zucker (1952-55)

Advisory Committee on Legislative Matters

Irwin A. Berg
 Arthur W. Combs
 Roy M. Dorcus
 Albert Ellis
 Stanley G. Estes
 Kenneth W. Spence

Ad Hoc Committee on Relations with the Medical Profession

Rollo May
 Dael Wolfe

A suggestion from the floor that the Committee on Ethical Standards for Psychology include a woman was referred to the Board of Directors with power to act.

14. The Council approved the following nominees, recommended by the Board of Directors, to be submitted to the International Union of Scientific Psychology to serve on the general executive committee for the 1954 International Congress of Psychology: George W. Kisker, Carroll C. Pratt, Roger W. Russell, Wayne Dennis, Donald G. Marquis, and Edwin B. Newman.

15. It was reported that the Council had elected by mail ballot the following persons to serve as APA representatives to other organizations:

National Research Council

Meredith P. Crawford (1953-56)
 Carl I. Hovland (1953-56)
 L. L. Thurstone (1953-56)

Social Science Research Council

Ernest R. Hilgard (1953-55)

16. It was reported that the following persons, recommended by the Board of Directors, had been approved by the Council on mail ballot as APA representatives to other organizations:

American Documentation Institute

Herbert S. Conrad (1952-54)

American Standards Association Committee Z58 on Standardization of Optics

William Berry (representative)
 Leo M. Hurvich (alternate)

Committee on Mathematical Training of Social Scientists

Clyde H. Coombs
 Allen L. Edwards

War Claims Commission's Special Advisory Committee

John W. Stafford

National Society for Crippled Children and Adults

Salvatore G. DiMichael

National Council for Mobilization of Education

Charles N. Cofer
 Fillmore H. Sanford

17. The Council elected Clifford T. Morgan to serve as APA representative to the American Association for the Advancement of Science for the term 1952-54.

18. The Council, upon recommendation by the Board of Directors, elected F. L. Dimmick as one of the delegates to the Inter-Society Color Council.

19. It was reported that the Board of Directors had appointed Ruth S. Tolman as delegate to the World Federation for Mental Health, with Marie Jahoda as alternate. The President is to appoint observers later.

20. It was reported that the Board of Directors had authorized the President to appoint a representative to Groupement International pour la Co-ordination de la Psychiatrie et des Methodes Psychologiques at an appropriate time.

21. It was reported that the Council had elected by mail ballot the following persons to serve as chairmen of the committees specified for the year 1952-53:

Publications Board
Convention Program
Committee

Lee J. Cronbach
 Launor F. Carter

Committee on Student Activities

Stanford C. Erickson

Committee on Public Relations

S. Rains Wallace, Jr.

Membership Committee

John W. Macmillan

Committee on Precautions in Animal Experimentation

Austin H. Riesen

* Replacing Norman L. Munn, who is out of the country

Committee on Audio-Visual Aids	Lester F. Beck	Committee on Academic Freedom and Conditions of Employment	Ernest R. Hilgard
Committee on International Relations in Psychology	Herbert S. Langfeld	Education and Training Board Committee on Postdoctoral Education	O. Hobart Mowrer
Committee on Test Standards	Lee J. Cronbach	Advisory Committee on Legislative Matters	Theodore M. Newcomb
Education and Training Board	E. Lowell Kelly	Committee on Directory of Psychological Service Centers	John G. Darley
Committee on Undergraduate Education	Wilbert J. McKeachie	Committee on Scientific and Professional Ethics and Conduct	Gilbert J. Rich
Committee on Subdoctoral Education	Ralph F. Berdie	Delegates to Inter-Society Color Council	Robert W. Burnham
Committee on Practicum Training	Roy Brener		
Committee on Doctoral Education	Delos D. Wickens		
Committee on Questionnaires	Willis C. Schaefer		
House Committee	Jerry W. Carter, Jr.		

22. The Council, upon recommendation of the Board of Directors, elected the following persons to serve as chairmen of the committees specified for 1952-53:

Committee on Relation of Psychology to Psychiatry	William A. Hunt
Committee on Ethical Standards for Psychology	Marion E. Bunch
Committee on Relations with the Social Work Profession	Howard E. Mitchell

23. The Council approved a recommendation of the Education and Training Board that the Committee on Psychology in Other Professional Schools and the Committee on the Teaching of Psychology in High Schools be special committees of the Education and Training Board, with their chairmen to be selected from among the members of that Board and that Board to appoint the committee members.

24. It was announced that the persons named in the accompanying list had served during the past year as representatives of the Association to the special functions indicated:

DELEGATE	FUNCTION	DATE
Fillmore H. Sanford	Meeting on Social Sciences and "Study of Tensions," U. S. National Commission for UNESCO	Sept. 21, 1951
Anne Anastasi	Conference on "Women in the Defense Decade," American Council on Education	Sept. 27-28, 1951
S. L. Crawley	Inauguration of the President of Brigham Young University	Oct. 8, 1951
Ronald R. Greene	Inauguration of the President of Denison University	Oct. 12, 1951
Louis Long	Inauguration of the President of Stevens Institute of Technology	Oct. 12, 1951
A. R. Gilliland	Inauguration of the Chancellor of University of Chicago	Oct. 18, 1951
J. Stanley Gray	Inauguration of the President of Agnes Scott College	Oct. 22-23, 1951
James S. Calvin	Inauguration of the President of University of Louisville	Oct. 30, 1951
William S. Barker	Inauguration of the President of Finch Junior College	Nov. 2, 1951
O. R. Chambers	Seventy-fifth Anniversary of University of Oregon	Nov. 2, 1951
Laurie T. Callicutt	Inauguration of the President of Texas Southern University	Nov. 4, 1951
Sheldon J. Korchin	Convention of the National Association for Music Therapy	Nov. 9-11, 1951
Ralph E. Jenson	Inauguration of the President of University of Arizona	Nov. 16, 1951
C. G. Browne	Inauguration of the President of University of Michigan	Nov. 27, 1951
Carl P. Duncan	Centennial Convocation of Northwestern University	Dec. 2, 1951
Delton C. Beier	Meeting of the World Federation for Mental Health, Mexico City	Dec. 12, 1951
Herbert S. Langfeld	Third National Conference, U. S. National Commission for UNESCO	Jan. 27-31, 1952
Gardner Murphy		
Roy E. Hoke	Inauguration of the President of Queens College (Charlotte, N. C.)	Mar. 29, 1952
P. Douglas Courtney	Annual Meeting of the American Academy of Political and Social Science	Apr. 18-19, 1952
Albert Pepitone		

DELEGATE	FUNCTION	DATE
George D. Stoddard	Annual Meeting of the American Council on Education	May 2-3, 1952
Fillmore H. Sanford	National Conference on U. S. Foreign Policy, Department of State	May 6-8, 1952
Carroll C. Pratt	Inauguration of the President of Rutgers University	May 8, 1952
P. W. Stansbury	Inauguration of the President of Bowling Green State University	May 10, 1952
Frank A. Fatzinger	Conference of the National Commission on Teacher Education and Professional Standards	June 25-28, 1952
Miles Murphy	Centennial Convention of the American Pharmaceutical Association	Aug. 20, 1952
Ruth S. Tolman (Delegate)	Meeting of the World Federation for Mental Health, Brussels	Aug. 25-30, 1952
Lorine Pruette (Observer)		
Ross Thalheimer (Observer)		

J. MEMBERSHIP CHANGES

1. It was announced that the deaths of the following members had been reported since the 1951 meeting:

LIFE MEMBERS

Walter V. Bingham	July 7, 1952
F. S. Breed	May 16, 1952
David S. Hill	November 10, 1951
Stella B. Vincent	August 30, 1951

FELLOWS

Milton Cotzin	September 3, 1951
Clark L. Hull	May 10, 1952
Henry C. Link	January 9, 1952
R. R. G. Watt	May 17, 1952
Beth L. Wellman	March 22, 1952

ASSOCIATES

McNairy M. Crutchfield	September 24, 1951
Mary West Daingerfield	August, 1952
William R. Duffey	August 28, 1951
John T. Gobey	December 31, 1951
Norman M. Grier	December 26, 1951
Florentine Hackbusch	June 3, 1952
Alma Long	September 25, 1951
Norman MacNaughton	July 12, 1951
Julia Mathews	December 3, 1951
William Orbison	February 14, 1952
Milo R. Stephens	December 14, 1951
Norma L. Stimson	November 11, 1951

2. It was announced that the following persons had been granted status as Life Members since the 1951 meeting:

Lucy D. Boring	B. F. Haught
Fowler D. Brooks	Sara Stinchfield Hawk
Charles A. Coburn	Harry M. Johnson
Bess V. Cunningham	Forrest A. Kingsbury
Arnold Gesell	Harry Dexter Kitson
Myrtle Mann Gillet	Frances E. Lowell
Louis D. Hartson	W. R. Miles

Katharine Murdoch
Isa D. Reed
Walter Dill Scott

Edward K. Strong, Jr.
Edward C. Tolman
Robert M. Yerkes

3. It was announced that the following persons had resigned since the 1951 meeting:

FELLOWS

Luton Ackerson
Louis Gellermann

ASSOCIATES

John J. Agoa	Mary Adah Gray
Vee Holt Alvarez-Tostado	Renatus Hartogs
Grace F. Atkins	Ann B. Hendy
Oscar Backstrom, Jr.	Helene F. Jacobson
Harold Vernon Bartlett	Marceline S. Jaques
Alex Bavelas	Thelma C. Johnson
Stanley C. Benz	Joan C. Kalhorn
Mary D. Berks	Edward Y. Kalpakian
Gertrude M. Bigelow	Anita L. Kassen
Elsie V. Blasdell	Margaret V. Kennedy
Rosabel Velde Brown	Morton J. Keston
Dorothy Toobert Burstain	Eleanor Klein
James A. Carrell	Muriel Landsberg
Han Piao Chen	Hazel Lincoln Lang
Angus W. Clarke, Jr.	Vernon F. Larsen
Earle A. Cleveland	Nissim Morris Levy
R. Maurine Clow	Lorraine MacLean
Alfred B. Cope	Alexander A. Maleski
Vincent F. Crowninshield	Phyllis L. Martin
David W. Danforth	Helen G. McConaty
Jeanne C. Davis	Marie Meier
Rose Andrea DiMeo	Alfred L. Moseley
Robert E. Dixon	Lois Noble
Ruth Abells Douglas	Mary R. Norris
Othra Elsie Eaton	Ruth Mayer O'Neal
Kay Edmondston	Arthur T. Orner
Margaret E. Fairbairn	Marjorie Parks
Natalie S. Feldman	Glenn R. Pease
Louise Finney-Chisholm	Harry J. Peightel
Roland A. Fitzpatrick	Watson O'D. Pierce
Anne E. Fleming	Louise Price
Marion T. Goldberg	G. Elmore Reaman

Olivia Burnett Rivers	Lillian Tow
Margaret H. Sanderson	Carl F. Trieb
Mary Alice Seibert	Anne E. Turner
Stanford Evertsen Seidner	William D. Varnell
Annette Silbert	Robert S. Wattles
Francena L. Stafford	Ruth E. Welty
Evelyn M. Stager	Paul K. Winston
George E. Stauffer	Walter A. Woods
Elizabeth C. Strickland	John R. Yale
Vernon D. Sutcher	Myra V. Zable
R. Brodie Taylor	

4. It was announced that the following persons had been reinstated since the 1951 meeting:

Eva R. Balken
Daniel Safir

5. It was announced that 1,426 persons were elected Associates of the APA as of January 1, 1952, as reported in the *American Psychologist*, 1952, 7, 36-42, 164.

6. It was announced that the following persons, elected as Associates as of January 1, 1952, did not confirm their election by payment of their first year's dues:

Mary L. Crocker
Jasper W. Holley
Melvin Rosenthal
Albert Shire

7. The Council, upon recommendation of the appropriate division and nomination by the Board of Directors, elected the following persons as Fellows of the APA:

Lawrence E. Abt	Division of Clinical and Abnormal Psychology
Gordon V. Anderson	Division on Evaluation and Measurement
	Division of Counseling and Guidance
Dugald S. Arbuckle	Division of Counseling and Guidance
William J. Arnold	Division of General Psychology
Philip F. Ashton	Division on the Teaching of Psychology
Leopold Bellak	Division of Clinical and Abnormal Psychology
Anna Berliner	Division of Experimental Psychology
James E. Birren	Division on Maturity and Old Age
Benjamin S. Bloom	Division of Educational Psychology
Maria Brick	Division of Clinical and Abnormal Psychology
Thomas E. Christensen	Division of Counseling and Guidance
Walter Houston Clark	Division of Personality and Social Psychology

William M. Cruickshank	Division of Clinical and Abnormal Psychology
Natalie T. Darcy	Division of Educational Psychology
Charles S. Dewey	Division of Industrial and Business Psychology
Georgia Dunn	Division on Esthetics
Albert Ellis	Division of Personality and Social Psychology
	Division of Clinical and Abnormal Psychology
I. E. Farber	Division of Experimental Psychology
Nicholas A. Fattu	Division on Evaluation and Measurement
Raymond H. Fletcher	Division of Industrial and Business Psychology
John W. French	Division on Evaluation and Measurement
L. Rene Gaiennie	Division of Industrial and Business Psychology
Howard E. Geiger	Division of Industrial and Business Psychology
Eleanor J. Gibson	Division of Experimental Psychology
Alberta S. Gilinsky	Division of Experimental Psychology
William W. Grings	Division on Evaluation and Measurement
	Division of Military Psychology
Julia Heil Heinlein	Division on Childhood and Adolescence
Lyle K. Henry	Division of Educational Psychology
Vincent V. Herr	Division on the Teaching of Psychology
Marshall S. Hiskey	Division of Educational Psychology
Marjorie K. P. Honzik	Division on Childhood and Adolescence
Sheldon J. Korchin	Division of Personality and Social Psychology
G. Gorham Lane	Division of General Psychology
Lawrence G. Lindahl	Division of Industrial and Business Psychology
Henry Clay Lindgren	Division of Counseling and Guidance
D. B. Lucas	Division of Industrial and Business Psychology
Melvin H. Marx	Division of Experimental Psychology
William B. Michael	Division on Evaluation and Measurement
	Division of Educational Psychology
Peter J. Napoli	Division of Clinical and Abnormal Psychology
Erland N. P. Nelson	The Society for the Psychological Study of Social Issues— A Division of the APA

Martin J. Nelson	Division of Educational Psychology	Theodora M. Abel	Division on Childhood and Adolescence
Harold J. Palmer	Division of Counseling and Guidance	Ethel M. Abernethy	Division on Childhood and Adolescence
Julian H. Pathman	Division of Clinical and Abnormal Psychology	Carl L. Altmeyer, Jr.	Division of Consulting Psychology
Marian Radke-Yarrow	Division on Childhood and Adolescence	Alfred L. Baldwin	Division on Childhood and Adolescence
Thomas W. Reese	Division of Experimental Psychology	Katharine M. Banham	Division on Childhood and Adolescence
Grace Rubin-Rabson	Division on Esthetics	Nancy Bayley	Division on Maturity and Old Age
Jay T. Rusmore	Division of Industrial and Business Psychology	Bruno Bettelheim	Division on Childhood and Adolescence
Fillmore H. Sanford	Division of Personality and Social Psychology	Albert L. Billig	Division of General Psychology
Douglas E. Scates	Division on Evaluation and Measurement	Morton E. Bitterman	Division of Experimental Psychology
Winifred S. Scott	Division of Educational Psychology	Peter Blos	Division on Childhood and Adolescence
Edward Joseph Shoben, Jr.	Division of Counseling and Guidance	Fred Brown	Division of Clinical and Abnormal Psychology
Henry Clay Smith	Division on the Teaching of Psychology	Arthur Burton	Division of Psychologists in Public Service
M. Brewster Smith	Division of Personality and Social Psychology	Norman Cameron	Division of Personality and Social Psychology
Virginia M. Staudt	The Society for the Psychological Study of Social Issues—A Division of the APA	Wendell R. Carlson	Division of General Psychology
Celia Stendler	Division on the Teaching of Psychology	Evelyn M. Carrington	Division of Psychologists in Public Service
G. Raymond Stone	Division on Childhood and Adolescence	Launor F. Carter	Division of Military Psychology
Mildred C. Templin	Division of Experimental Psychology	Teobaldo Casanova	Division on Childhood and Adolescence
W. A. Thalman	Division of Experimental Psychology	Arthur W. Combs	The Society for the Psychological Study of Social Issues—A Division of the APA
Ledyard R. Tucker	Division on Childhood and Adolescence	Meredith P. Crawford	Division on Evaluation and Measurement
Morgan Upton	Division of General Psychology	Henry S. Curtis	Division of Clinical and Abnormal Psychology
Claire Myers Vernier	Division on Childhood and Adolescence	Paul L. Dressel	Division of Educational Psychology
Edward L. Walker	Division of Educational Psychology	Harold A. Edgerton	Division of Military Psychology
Morey J. Wantman	Division on Evaluation and Measurement	Horace B. English	Division of Consulting Psychology
Elizabeth B. Wolf	Division of Clinical and Abnormal Psychology	Paul E. Fields	Division of Counseling and Guidance
Philip Worchel	Division of Experimental Psychology	Else Frenkel-Brunswik	Division of Consulting Psychology
		James J. Gibson	Division on Childhood and Adolescence
		Ruth E. Hartley	Division on Esthetics
		Glen L. Heathers	Division of Personality and Social Psychology
		Elisabeth F. Hellersberg	Division on Childhood and Adolescence
			Division on Childhood and Adolescence

8. The following, already Fellows of the APA, were nominated and elected for Fellow status in the divisions as indicated:

REPORT OF THE RECORDING SECRETARY

To the Council of Representatives:

The Board of Directors met March 20, 21, 22, and 23 at The Michigan Union, Ann Arbor, Michigan. The Board convened from 9:00 A.M. to 12:30 P.M., 1:30 P.M. to 5:30 P.M., and 7:30 P.M. to 10:30 P.M. on March 20; from 9:00 A.M. to 12:30 P.M., 2:00 P.M. to 5:45 P.M., and 8:00 P.M. to 10:45 P.M. on March 21; from 9:00 A.M. to 12:30 P.M. and 1:30 P.M. to 5:30 P.M. on March 22; and from 9:00 A.M. to 12:30 P.M. and 1:30 P.M. to 4:15 P.M. on March 23.

The following persons were present: J. McV. Hunt, Robert R. Sears (March 20-21), Laurance F. Shaffer, Carroll L. Shartle, E. Lowell Kelly, Rensis Likert, Jean W. Macfarlane, Robert L. Thorndike, O. Hobart Mowrer, Arthur W. Melton, Fillmore H. Sanford, and Dorothy C. Adkins.

I. REPORTS

A. Reports of Actions since September 1951

1. Board of Directors

a. Victor C. Raimy was appointed Executive Officer of the Education and Training Board; Helen Nahm, Mary Ford, E. Llewellyn Queener, and George A. Miller were appointed to the Education and Training Board's Committee on Psychology in Other Professional Schools, and Milton A. Saffir was appointed to its Committee on Subdoctoral Education; and Stephen M. Corey was elected Chairman of the APA Advisory Editorial Board for the *Journal of Educational Psychology*.

b. The following panel was selected from division nominations to advise USAFI on text material in the area of psychology of adjustment: Irwin A. Berg, Edward S. Bordin, W. A. Bousfield, Rex Collier, James H. Elder, Nicholas Hobbs, William A. Hunt, Arthur Jenness, E. Lowell Kelly, Robert Leeper, David C. McClelland, Fred McKinney, Norman L. Munn, Glenn V. Ramsey, Fritz Redl, Francis P. Robinson, Floyd L. Ruch, Morton A. Seidenfeld, Laurance F. Shaffer, Franklin J. Shaw, Edward J. Shoben, Jr., Lawrence H. Stewart, Donald E. Super, Percival M. Symonds, and C. Gilbert Wrenn.

c. The following panel was selected from division nominations to advise USAFI on text material in the psychology of personality at the high-school

level: Theodora Abel, Donald K. Adams, Gordon W. Allport, Thelma G. Alper, Donald T. Campbell, Charles N. Cofer, Richard S. Crutchfield, Wayne Dennis, John Dollard, Horace B. English, B. von Haller Gilmer, Ernest R. Hilgard, Robert Leeper, Clarence J. Leuba, Fred McKinney, O. Hobart Mowrer, Theodore M. Newcomb, Vincent Nowlis, Ralph H. Ojemann, Victor C. Raimy, Fritz Redl, Floyd L. Ruch, Laurance F. Shaffer, Percival M. Symonds, and Robert W. White.

d. The Board approved sending the agenda for its spring meeting to the Council and to divisional officers and asking them to suggest names for committee slates.

e. Because hotel space was unavailable for an over-the-weekend schedule, the dates for the 1952 annual meeting were changed to September 1-6.

f. The 1954 annual meeting in New York will be September 3-8, in accordance with the preferences of a sample of the membership.

g. The Manpower Analysis Branch of the Office of Naval Research contributed about \$2,000 for analysis of the APA register-directory questionnaires.

h. The USPHS was requested to provide \$18,000 to support the E & T program for 1952-53.

i. A budget of \$300 for the Building Committee was approved.

j. A budget of \$500 for the Committee on Academic Freedom and Conditions of Employment was approved.

k. The price of the *Journal of Consulting Psychology* to APA members was changed to \$3.50, in accord with the intent of the Council action in September 1951. An explanatory memorandum was sent to the Council and a correction made in the published *Proceedings*.

l. Distribution by the Central Office of a Syracuse University report on contract research was approved.

2. President

a. The President appointed the following Committee on the Utilization of Manpower upon the basis of Council action last September as recommended by the Division on the Teaching of Psychology: Leonard Carmichael (chairman), John C. Flanagan, Frank A. Geldard, Charles S. Gersoni, Rensis Likert, Marion W. Richardson, Morton A. Seidenfeld, and Robert L. Thorndike.

b. The President appointed the following subcommittee of the Board to review Fellowship election procedures as directed by Council action of September 1951: O. Hobart Mowrer (chairman), Laurance F. Shaffer, and Robert L. Thorndike.

3. Recording Secretary

The objection of one member to the 1951 Council action not to print committee reports was reported.

4. Treasurer

The financial report for 1951 was accepted by the Board.

5. Executive Secretary

a. It was reported that the APA on October 12, 1951, paid \$400 annual dues to the International Union of Scientific Psychology (approved by Council, September, 1949). The Board voted to ask the Secretary-General of the International Union of Scientific Psychology to present a full report of progress at the September, 1952 meeting, particularly with reference to negotiations for affiliation of that union with the International Council of Scientific Unions and to its relation with the International Congress of Psychology.

b. The Executive Secretary appointed a half-time Technical Aide to the Conference of State Psychological Associations.

II. COMMITTEE REPORTS

A. Committee on Public Relations

The Board received the report of the Committee on Public Relations with thanks.

The Committee had made the following recommendations to the Board:

1. That the APA consider hiring trained journalists preceding APA meetings to prepare press releases on newsworthy papers, under the close direction of the APA Public Information Officer.

2. That the APA attempt to provide this service for the 1952 meeting of the Eastern Psychological Association and, if successful, try it again at the APA convention in Washington.

3. That in the March, 1952 call for papers each author be asked:

a. whether or not he is willing to have his paper the subject of a prepared press release;

b. whether, if so, he wishes to see the write-up before the release; and

c. whether he can have a full version of the talk ready by 1 August 1952 if it is requested.

4. That the Program Committee of each division be requested to designate, among the papers they select, those which do and do not seem newsworthy.

The Board voted to request the Program Committees of the divisions and the Committee on Public Relations to select a number of abstracts that look significant from the standpoint of publicity, to have the Program Committees request the authors of the selected abstracts to submit complete copies of their papers in time to have press releases prepared, to have one person prepare press releases, and to have the Committee on Public Relations evaluate the results. A budget of not to exceed \$1,000 was approved for this function. The Executive Secretary was instructed to design this service in the form of an experiment so that an appraisal of its value can be made.

B. Advisory Committee on Legislative Matters

The Board voted to receive a preliminary report from the Advisory Committee on Legislative Matters, to express its appreciation to the Committee, and to encourage the Committee to continue to keep the Executive Secretary and the Board informed on legislative matters.

The Board took a straw vote on a number of questions raised by the Committee: it voted that the APA should develop a policy concerning legislation relevant to psychologists, that the APA should not actively stimulate legislation designed primarily to protect psychologists, that certification is preferable to licensing of psychologists, that the APA should attempt to prevent legislation that limits the rights of psychologists, and that general certification for all psychologists is preferable to different certification for different kinds of psychologists. The Board tabled the question of whether or not the APA should state a definition as to who is a psychologist and who is not and did not take a straw vote on such questions as "grandfather" clauses, educational level or other controls for determining who should be covered by legislation, accrediting of universities in relation to legislation, financial matters relating to legislation, consequences of violation of legislation, and membership on examination boards for legislation.

The Board voted to send the report of the *Ad Hoc* Committee on Relations with the Medical Profession and the results of the Board's straw votes to the Advisory Committee on Legislative Matters, for that Committee to transmit to the Conference of

State Psychological Associations; and to request the Committee to analyze the problem further and make recommendations on policy questions where appropriate.

The Board voted that the report be edited and distributed to the Council before the September, 1952 meeting, with an explanatory statement that the Board at its March meeting considered the controversial issues mentioned in the report and that, while no action was taken at that time, informal reactions to several issues were obtained by means of the straw votes mentioned above.

C. Committee on Ethical Standards for Psychology

It was reported that the Committee has received permission from the Rockefeller Foundation to use an unexpended balance of \$1,978.97 from an original award of \$8,100 for its work up to September, 1952.

D. Committee on Relations with Speech Pathologists

The Committee on Relations with Speech Pathologists has recommended that it be dissolved and that steps be taken to create a joint committee of the APA and the American Speech and Hearing Association. The Board voted to dissolve the present committee and to instruct the Executive Secretary to write a letter to the American Speech and Hearing Association expressing regret that its viewpoint has been inadequately considered heretofore and offering to appoint a new committee along lines to be worked out with them if they believe such a committee would be useful.

E. Committee on Royalties Contributed to the APA

A report from the Committee on Royalties Contributed to the APA was received with thanks. The Committee recommended that (1) a separate corporation known as "The American Psychological Foundation" be established; (2) the Foundation receive gifts of any amount from psychologists and others; (3) the APA set up boards and committees for the operation of the Foundation and for decisions on uses of funds. The Board voted to transmit these recommendations to the Council for action by mail vote and instructed the Executive Secretary to initiate legal staff work and consult with the committee on steps to implement action. The Board voted to request the Council to approve by mail that the Committee on Incorporation consist of the last seven presidents of the APA willing to serve.

F. *Ad Hoc* Committee on Relations with the Medical Profession

The Board considered at some length a revision of a report of the *Ad Hoc* Committee on Relations with the Medical Profession. The report consists of two parts, one on professional relations in general and one on relations with the medical profession. The Board voted to commend the report to the Council for discussion at the September meeting and to invite comments from individual members through appropriate divisions to assist it in preparing recommendations for Council action on the Committee's recommendations. The Board approved a statement to preface the report. The Board voted to publish the first part of the report in the *American Psychologist* and to ask the Committee to explore the possibility of redrafting the second part before its publication.

G. Education and Training Board

The Board received the report of the Education and Training Board with thanks.

The E & T Board had reviewed the summary reports and ratings of university training programs in clinical psychology in detail and unanimously approved them. The Board of Directors approved the recommendations regarding the ratings of clinical training programs as transmitted by the E & T Board and the wording of a form letter to be sent to departments rated on the basis of an interim report only. The Board approved publication, in the *American Psychologist*, of the ratings of the clinical training programs preceded by a statement essentially the same as the corresponding statement in the May, 1951 issue. It was voted that the list should be headed "List of Doctoral Training Programs in Clinical Psychology Approved by the Education and Training Board, with the Concurrence of the Board of Directors, American Psychological Association (March, 1952)."

The Board voted to recommend to the Council approval of a recommendation of the E & T Board that the Committee on Psychology in Other Professional Schools be changed from a standing committee of that Board to a special committee, its chairman to be designated by the Council of Representatives upon nomination by the Board of Directors from among the members-at-large of the E & T Board, its present membership to continue without rotation or staggered terms, and its future status as a special or standing committee to be determined by

the Board of Directors upon recommendation from the E & T Board.

The Board voted, with one dissenting vote, to establish a special committee to be called the Committee on the Teaching of Psychology in High Schools. This committee is to gather facts concerning the teaching of psychology in high schools, explore courses of action, and formulate recommendations for the E & T Board.

The Board approved the E & T Board's recommendation that a standing Committee on Postdoctoral Education be created.

The Board voted, with one dissenting vote, to recommend to the E & T Board that predoctoral training be transferred to the Committee on Doctoral Education, with the Committee on Subdoctoral Education to be concerned only with the terminal MA.

The Board voted to approve a recommendation that training institutions consider the desirability of bringing the "Statement" of the Committee on Ethical Standards for Psychology to the attention of all graduate students in psychology and helping such students understand the various applications of the "Statement." The Board voted to authorize the Committee on Undergraduate Education, acting through and with the cooperation of the Executive Secretary, to explore the possibilities for foundation support of two full-time fellowships for a year, to be used for visitation and detailed interviewing at representative samples of smaller colleges in surveying the responsibilities and conditions of work and scholarship for psychology teachers.

The Board voted to authorize the E & T Board to establish such task committees as it needs, obtaining specific approval from the APA Board for any funds such committees may require beyond the E & T Board budget.

III. NOMINATIONS

A list of proposed nominees for boards and committees suggested by Council members, divisional officers, and committee chairmen was available.

The Board voted that Rensis Likert, Jean Macfarlane, and Arthur Melton would constitute the Board's subcommittee to advise on the *American Psychologist*, their names to be included on the inside cover page as Advisory Editors.

The Board added Stanley G. Estes to the Advisory Committee on Legislative Matters effective immediately.

IV. FUTURE MEETINGS

A. 1953 and 1954 Meetings

Since September 4-9 (over the Labor Day weekend) are the only possible dates for Michigan State, the Board agreed to these dates for the 1953 meetings. According to Council vote, the 1954 meetings will be held in New York City in the Penn Zone Hotels. The Board earlier voted by mail in favor of the dates September 3 (Friday) through September 8 (Wednesday).

B. The International Congress

The possibility of holding the International Congress in conjunction with the 1954 APA meetings was discussed. The Board voted that, in view of the fact that the McCarran Act has not been modified, the APA will express its desire to join the Canadian Psychological Association in inviting the International Congress to meet in Montreal, preferably in the early summer of 1954, at dates to be decided by an appropriate committee of the two associations. The Board took informal action to name an interim committee consisting of Rensis Likert and Lowell Kelly, with the understanding that they would consult with Donald Marquis, to initiate plans for the International Congress in 1954 and to report to the Board at the September 1952 meeting.

The Executive Secretary was instructed to write to the Penn Zone Hotels in New York City informing them that the APA has decided that it cannot appropriately invite the International Congress of Psychology to meet in New York City, because of the McCarran Act.

C. Convention Manager

The Board discussed briefly the question of continuing the practice of using the same convention manager versus using a different on-the-scenes member of the APA each year. The consensus was that the Executive Secretary should make the decision on this matter.

D. Request of Psi Chi to hold its Meetings in Conjunction with the 1952 APA Convention

Problems presented when other organizations hold meetings in conjunction with the APA convention were considered. It was voted that space and time within available facilities be provided for the Psi Chi meetings. It was voted that the APA not print in the annual program titles of papers or program schedules for papers for which abstracts have not

been reviewed and approved by the Program Committee.

E. Request of American Statistical Association for Joint Sponsorship by Division 14 and ASA of Program Sessions at ASA Annual Meeting in 1952

In view of the fact that a division can hold a meeting apart from the APA at any time, it was not considered appropriate for the APA to act on a request concerning a meeting of an APA division with another organization. It was suggested that divisions of the APA should inform the APA office of meetings they plan to hold with other organizations.

V. MEMBERSHIP

A. Report of Board Subcommittee on Fellowship Election Procedures

The Board's Subcommittee on Fellowship Election Procedures had proposed two procedures, the first for immediate use and the next for use two years hence. It was voted that at the 1952 meeting the names of applicants for Fellowship and their sponsors will be posted, with members having an opportunity to communicate any question to the APA office on the understanding that action will be delayed on any case about which serious questions are raised. In the listing, it will be made clear that the names of applicants are submitted by Membership Committees of the divisions and have not yet been acted upon by the divisions or by the Board or Council. The *American Psychologist* will contain a notice that this procedure of listing names is to be followed.

The President requested the Board subcommittee to continue to study the Bylaws provisions on membership, with the aim of recommending more uniform procedures among the divisions. It was voted that the Board would recommend to the Council for action at the September meeting a clearly formulated series of motions for procedures to be followed in 1953 and thereafter, including recommendations for uniform application blanks.

B. Revised Application Blanks for Associate Membership

The revised application blanks for Associate membership leave the question of how the APA can get information from the person who is asked to endorse an application but who does not wish to endorse it. It was noted that the APA might initiate

inquiries to various persons associated with an applicant rather than limit its sources of information to sponsors selected by the applicant. The Board voted to ask the APA Membership Committee to study the procedures of applying for Associate membership, including the application blanks, and the whole procedure of electing Associates, and to report to the Board before its September meeting.

C. Applications for Associate Membership: Cases Deferred by Membership Committee

The Board voted to elect seven new Associates, with membership effective as of January 1, 1952.

VI. PUBLICATION MATTERS

A. 1952 Directory

Several alternatives to a complete directory or an address list for 1952 were considered. The Board voted to direct the Executive Secretary to appoint an *ad hoc* committee consisting of IBM specialists among the membership to explore the possible application of IBM alphabetic equipment to printing a directory of names and addresses, as well as other possible applications of IBM equipment to work in the Central Office. The Executive Secretary was directed not to undertake the usual kind of complete directory for 1952 until further instructed.

B. Fees for Student Journal Group

The present fees for the Student Journal Group are \$7.50 a year, which covers subscriptions to the *American Psychologist* and to *Psychological Abstracts* (the directory is also provided). In addition, students are permitted to subscribe to the *Psychological Bulletin* for \$2.00 a year. The Council in September, 1951 increased the subscription rates of voluntary journals and presumably also to the student group. To comply with postal regulations the statement on the dues bill about the cost of the two journals above will have to be changed to \$4.00 each, effective January 1953. The Board voted to report to the Council that the action of increasing the subscription rates of voluntary journals to members has been interpreted as including students and that increase in subscription rates to outsiders will require an increase in fees for the Student Journal Group to \$8.00 effective January 1953.

C. Dues for Foreign Affiliates

Foreign Affiliates now pay \$4.00 a year and receive the *American Psychologist* and the directory. The dues bill contains a statement that the subscrip-

tion rate for the journal is \$4.00 and that the directory is free. The Board approved this statement.

D. Free Reprints

The action of last September abolishing free journal reprints for manuscripts submitted after January 1, 1952, was reviewed. The Board passed a motion to request the Publications Board to reconsider the matter of costs now borne by authors, including costs of reprints, and to prepare recommendations to the Board and Council. The Board voted to ask the Finance Committee, the Executive Secretary, and the auditors to review the allocation of charges against journals, with the understanding that they would communicate with the Publications Board.

E. Report on *American Psychologist*

The Board voted to have on the agenda for the September meeting a report from the editor on the *American Psychologist*.

VII. CENTRAL OFFICE

A. Placement System

Various issues in deciding on the merits of the present "personalized" placement service of the Central Office versus a less expensive more "impersonal" system were discussed. The Board instructed the Executive Secretary to abandon the present type of placement service and at the earliest possible date to adopt a new plan, combining personalized placement activities at regional and annual meetings with a periodic Employment Bulletin. It was to list openings without identifying the specific employing agency, and inquiries were to be sent to the Central Office and forwarded to the employer. It also was to list applicants, with their qualifications described in their own terms (age, sex, preferred locations, degrees, experience, salary limits, etc.), the applicants to be charged one-half the cost of the listing.

B. General Operations

The Board's Subcommittee on Central Office Affairs considered several questions related to personnel in the Central Office, including the most effective way of handling the matter of tenure of professional employees in the Central Office. The Board voted that, in view of the need for continuity in the Central Office, the normal term of employment for professional employees will not expire with the term of the Executive Secretary but will extend one year beyond, with the understanding that a new

Executive Secretary may of course take action before this extended termination date to reappoint them for another term extending one year beyond the end of his term.

C. Travel Budget for Central Office Employees

The Board voted to increase the Central Office travel budget from \$1,500 to \$2,000, to provide for some travel of Central Office employees in addition to the Executive Secretary.

VIII. MISCELLANEOUS

A. Principles on the Qualifications of Clinical Psychologists

Division 7 and Division 16 requested the Board to consider recommending that ABEPP adopt principles to insure (a) that clinical psychologists are adequately trained in the psychology of all age groups and (b) that clinical psychologists who specialize in work with children have adequate training and experience. The Board referred this request to the Education and Training Board and to ABEPP, without recommendation, for their consideration, calling attention to the ethical problem involved when a psychologist works in an area for which he is not qualified. The Board voted that cases of persons shifting into fields in which they are not qualified by training and experience should be referred to the Committee on Scientific and Professional Ethics and Conduct and, if they are diplomates, to ABEPP.

B. Assignment of Numbers of Council Representatives to APA Divisions

The Board approved the allotment of numbers of division representatives for 1952-53, based on present division membership as reported by the Executive Secretary.

C. A "Museum of Psychology"

It has been suggested that APA consider establishing at national headquarters a psychological museum in which historical instruments and manuscripts might be collected and displayed. The Board tabled action on this proposal until more information on space is available.

D. Booklet on "Careers in Psychology"

The need for a booklet on "Careers in Psychology" was again presented. The Board reaffirmed a previous action to authorize the Executive Secretary to proceed with drafting such a booklet, giving it

high priority and consulting with other persons as desired.

E. Expenses of Representatives to Other Organizations

The Board voted that when an officially delegated representative to another organization does not believe that he or his employer should pay for such items as luncheons or registration fees charged by the organizations, the APA will reimburse him upon receipt of a formal request.

F. SPSSI Suggestion about Governmental Security Programs

The Council of SPSSI has suggested that the Board consider sponsoring an inquiry into the effects of current security programs on psychology, psychologists, and the government. The Board considered whether facts are or can be made available on whether or not scientific progress is hindered by loyalty checks. The Board instructed the Executive Secretary to discuss with S. S. Stevens the possible desirability of exploring the problem further with other associations such as NRC and AAAS.

G. Action Regarding the University of California

The question of under what circumstances the APA should lift its ban against the University of California was discussed. The consensus was that the ban should not be lifted as long as the reason for it still exists.

H. Possible APA Efforts to Foster Better International Relations in Psychology

Several members, and Herbert H. Williams of the Institute of International Education, have expressed a hope that the APA will consider how to overcome barriers to international communication among psychologists by such means as (a) planning itineraries of visiting foreign psychologists; (b) seeking support for exchange professorships; (c) seeking Ford Foundation funds for fellowships for foreign scholars. The Board voted that the various proposals be sent to the Committee on International Relations for recommendations. The Board also referred to this Committee the problem of contacting appropriate persons, in the government and elsewhere, responsible for the exchange of postdoctoral foreign fellows in an effort to develop workable itineraries.

I. McCarran Act

It was voted to concur strongly in the resolution on the McCarran Act passed by AAAS in December

1951. It was the consensus that follow-up action pertaining to the motion might best be delayed until it was known definitely where the International Congress would meet.

J. Malpractice Insurance

The Board authorized the President to appoint a task committee, with representatives from appropriate divisions and with no budget, to explore the advantages and limitations of so-called malpractice insurance for psychologists and to report to the Board before its September meeting.

K. Suggestion Regarding Election to Council of Representatives

The Board considered ways of maximizing participation of Council members in APA business, including arrangements whereby the president, past-president, and president-elect of each division would be Council members. Several divisions have their secretaries as Council members, and they could also amend their Bylaws to have other officers be Council members. There could be more mail balloting, special news letters could be sent to Council members, and the Council could receive Board minutes earlier than September. There was a consensus that it would be desirable to take such steps to increase the participation of the Council in APA business.

L. Special Medals

Interest has been expressed in creating a medal, in honor of a particular psychologist, to be awarded annually, with or without monetary award, to an APA member. The consensus was that the APA as such should not initiate such awards but would be receptive to administering them. Action was postponed.

M. Building Business

It was reported that the APA had purchased a property at 1333 16th St. and was applying for Zoning Board permission to occupy it. The Executive Secretary raised several general questions pertaining to the building for the Board to consider. The Board voted to proceed with a drive to raise money to complete a building fund. The consensus was that a direct mail approach should be used after the Zoning Board had acted. The Board instructed the House Committee to explore the feasibility of using the space above the garage of the new property as office space to be rented to nonprofit organizations and to report to the Committee that the Board believes this to be desirable.

N. Representative to Meeting in Mexico

It has been requested that the Board name an APA member as IUSP delegate to a congress of the World Organization for Early Childhood Education to be held in Mexico City in August, 1952. The Board agreed to ask the Division on Childhood and Adolescence to suggest names to be considered.

O. Psychologists and Social Security

The New York Association of Psychologists in Private Practice has called to the attention of the APA that psychologists, unlike physicians, lawyers, Christian Science practitioners, etc., are not exempt from making Social Security tax payments. It was informally agreed that the Executive Secretary would write the NYAPPP that it is the consensus of the Board that it is to the advantage of psychologists to be included.

The Board directed the Executive Secretary to obtain from the OASI and the Bureau of Internal Revenue a formal ruling on whether or not royalties, consultation fees, lecture fees, and other honoraria are subject to social security taxes. (It is considered desirable that they be so and that any official ruling obtained be published).

P. Psychological Services as Tax-Deductible Expenses

The NYAPPP has called to the APA's attention that, while medical and dental expenses are deductible from income for income tax purposes, fees paid to psychologists for psychotherapy are not. No action was taken, since it was pointed out that the only way to obtain a ruling is to get a case into court.

Q. Budget for Finance Committee

The Board approved a budget of \$500 for the Finance Committee to permit it to meet this spring.

R. Committee on Standards for Psychological Service Centers

In September, 1951 the Council voted to withhold action on the report of the Committee on Standards for Psychological Service Centers pending completion of a pilot study by the Connecticut State Psychological Society, which has since decided not to conduct a study. The Board voted that the President should appoint a special committee of the Council to review the report in detail, transmitting

recommendations through the Board for appropriate Council action at the September meeting.

S. Letter of Thanks to the University of Michigan

The Board voted that the President of the APA should write to Dr. Harlan H. Hatcher, President of the University of Michigan, with copies to Mr. Frank Kuenzel, Manager of the Michigan Union, and to Dr. Donald Marquis, Chairman of the Department of Psychology, to thank them for having extended the hospitality of the university to the APA Board.

Respectfully submitted,

DOROTHY C. ADKINS
Recording Secretary

REPORT OF THE TREASURER FOR 1951

To the Council of Representatives:

The accompanying table gives the figures for APA income and expenses for 1951. The figures in the table are taken from the official auditor's report.

Perhaps the outstanding fact about 1951 finances is that we ended the year with a deficit of \$13,-217.26. We had a total income of \$287,375.20 and a total expenditure of \$300,592.46. The major factor in the deficit was the \$34,441.73 spent to produce the 670-page biographical directory. This volume cost us approximately \$2.87 a copy and was distributed to members and affiliates without charge.

In 1952, preliminary figures indicate, we will end the year without an operating deficit, but we will assume an indebtedness of \$75,000 to help cover the costs of purchasing and refurbishing the new national headquarters.

While the Association does not possess the amount of reserves generally regarded as proper for organizations like APA, we are, according to most standards, financially sound.

The accompanying table does not include figures on grants to APA from outside sources. In 1951 there was a \$4,000 grant from the U. S. Public Health Service for the old Committee on Training in Clinical Psychology for the period ending June 30, 1951, which was entirely expended. The sum of \$7,500 was also received from USPHS as one-half of the grant of \$15,000 for the new Education and Training Board for the year beginning July 1, 1951; on December 31, 1951, the unexpended balance in this grant was \$2,795.65. There was a grant from the Rockefeller Foundation for support of the work

of the Committee on Ethical Standards in Psychology. The expenditures of the Committee for 1951 amounted to \$2,439.80, leaving an unexpended balance of \$1,050.20.

Respectfully submitted,

CARROLL L. SHARTLE
Treasurer

1951 APA INCOME AND EXPENSE

Income

DUES:

Fellows	\$ 10,308.15
Associates	12,898.52
For Divisions	11,131.00
Student affiliates	-1,475.89*
Other affiliates	931.64
Total dues	\$ 33,793.42

SUBSCRIPTIONS:

Member journals and directory (included with dues)	95,007.08
Other member subscriptions	42,148.20
Abnormal	\$ 9,039.30
Applied	5,312.70
Comparative	3,737.30
Consulting	7,734.20
Experimental	4,827.70
Monographs	4,705.20
Review	6,791.80
Affiliate subscriptions	1,946.00
Abstracts	213.00
Bulletin	1,733.00
Nonmember subscriptions	61,455.65
American Psycholo- gist	4,070.28
Abnormal	8,429.07
Applied	8,645.49
Comparative	3,205.05
Consulting	4,493.58
Experimental	9,056.22
Abstracts	9,601.08
Bulletin	5,785.58
Monographs	2,513.65
Review	5,655.65
Total subscriptions	200,556.93

OTHER PUBLICATION INCOME:

Reprints	6,029.07
Early and extra publication ...	12,997.97
Sale of single copies and back issues	16,052.09
From Monographs authors	2,500.41
Advertising	10,421.50
Miscellaneous	688.15
Total other publication	48,689.19

MISCELLANEOUS INCOME:

Interest on investments	2,729.33
Miscellaneous	1,606.33
Total miscellaneous	4,335.66
TOTAL INCOME	\$287,375.20

Expenses

PUBLICATION EXPENSE:

Printing	\$172,350.54
American Psycholo- gist	\$22,438.14
Abnormal	13,484.75
Applied	7,814.34
Comparative	7,803.91
Consulting	8,985.51
Experimental	14,318.26
Abstracts	33,144.13
Bulletin	12,027.04
Monographs	11,023.18
Review	6,869.55
Directory	34,441.73
Reprints	10,935.54
Editorial stipends	5,454.30
Abstracts office expense	8,037.34
Salaries	6,451.36
Abstracters and translators	320.96
Supplies and miscel- laneous	1,265.02
APA office expenses charged to publications	36,987.83
Salaries	33,091.37
Rent and utilities ..	1,441.89
Supplies and miscel- laneous	2,454.57
Total publication	\$233,765.55

BOARDS AND COMMITTEES

Board of Directors ..	2,644.04
Policy and Planning Board	2,453.14
Program	331.58
Scientific and Profes- sional Ethics	9.00
Publications	918.29
Relations with Psychi- atry	—
Relations with Social Work	372.09
Intraprofessional Re- lations	231.87
International Relations	40.00
Review Gundlach Case	18.80
Audio-Visual Aids ..	14.05
University Department Chairmen	662.58
Conf. State Psychol. Associations	—

* Deficit represents excess of allocation for journals and directory over income

Building	194.80
Counselor Training Program	213.00
<i>Ad Hoc</i> Com. Utiliz. Psychologists	142.70
Public Relations	55.26
Test Standards	837.59
<i>Ad Hoc</i> Com. Rel. Med. Profession ...	661.23
Finance	268.76
Subcom. on Education of Psychol. ...	143.16
†Training in Clinical Psychology	4,568.38
Membership	76.86
†Education and Training Board	845.13

GENERAL APA ACTIVITIES:

Dues paid to divisions	4,627.13
Recording Secretary	400.00
Expenses of annual meeting	552.28
Expenses of annual election	1,834.64
Professional services	1,769.83
Central Office (nonpublication) .	34,348.52
Salaries	24,625.70
Rent	1,567.27
Supplies and miscellaneous	8,155.55
Travel, Executive Secretary	1,890.40
Membership and contributions to other organizations	701.80
Building Fund	5,000.00
Total nonpublication	\$ 66,826.91
TOTAL EXPENSE	\$300,592.46
TOTAL INCOME	\$287,375.20
TOTAL EXPENSE	300,592.46
DEFICIT	13,217.26

REPORT OF THE COUNCIL OF EDITORS

To the Council of Representatives:

The annual meeting of the Council of Editors was held on April 26, 1952 at Cleveland, Ohio. All Editors were present plus Dr. Lorraine Bouthilet, Managing Editor; Dr. Fillmore H. Sanford, Executive Secretary; Wayne Dennis, and Edward Girden, the incoming editor and book review editor of the *Psychological Bulletin*.

The Executive Secretary presented a detailed financial report for APA publications for 1951. The circulation figures for all journals except one showed at least small increases. The three journals which

† In addition to grant from the United States Public Health Service.

are furnished to each member showed circulation increases which reflected the increase in membership. Publication costs still continued to rise although only three journals showed a loss in the financial statement.

The annual reports of the Editors of the ten journals for 1951 were presented and approved. The accompanying table shows the number of manu-

DISPOSITION OF MANUSCRIPTS BY APA JOURNALS, 1951

	Received	Accepted	Rejected	Average Lag* (Months)
<i>Amer. Psychologist</i> ..	49	20	29 (59%)	6†
<i>J. abnorm. soc. Psychol.</i>	290	72	218 (75%)	14
<i>J. appl. Psychol.</i>	151	98	53 (35%)	11
<i>J. comp. physiol. Psychol.</i>	94	69	23 (24%)	14
<i>J. consult. Psychol.</i> ..	213	103	110 (52%)	9
<i>J. exp. Psychol.</i>	150	109	41 (27%)	11
<i>Psychol. Abstr.</i>	—	—	—	9‡
<i>Psychol. Bull.</i>	70	33	37 (53%)	9
<i>Psychol. Monogr.</i> ...	39	5	27 (69%)	13
<i>Psychol. Rev.</i>	130	56	74 (57%)	10

* The figure for publication lag is the mean number of months between date of receipt of manuscripts and month of publication—for manuscripts published in 1951, but not including those given prior publication at the author's expense.

† The figures for the *American Psychologist* do not include official APA reports.

‡ Action was pending in the case of certain manuscripts for the following journals: *J. comp. physiol. Psychol.*, 2; *Psychol. Monographs*, 7.

§ Lag for *Psychological Abstracts* is based on a special study.

scripts received in 1951 and the disposition made of them. The rejection rate increased for five of the journals when compared with 1950. Publication lag varied somewhat from 1950 with two journals showing no change, four increasing slightly, and three decreasing.

The APA Publications Manual which was started in 1950 will be published as a supplement to the July, 1952 issue of the *Psychological Bulletin*.

Respectfully submitted,

H. S. CONRAD
H. F. HARLOW
J. McV. HUNT
L. H. LANIER
C. M. LOUITTIT, *Chairman*
A. W. MELTON
D. G. PATERSON
C. C. PRATT
F. H. SANFORD
L. F. SHAFFER

THE WORK OF THE AMERICAN BOARD OF EXAMINERS IN PROFESSIONAL PSYCHOLOGY

1952 ANNUAL REPORT

AMERICAN BOARD OF EXAMINERS IN PROFESSIONAL PSYCHOLOGY

INTRODUCTION ¹

THE American Board of Examiners in Professional Psychology presents in this report a record of its work for the year ending July 31, 1952. This is the annual report of the Board to the Council of Representatives of the American Psychological Association and a general report to the membership of the American Psychological Association and the Canadian Psychological Association.

Since its incorporation in April 1947, the Board has held 29 physical meetings lasting from three to five days each, exclusive of travel time. Three meetings were held during the year covered by this report.

Within the past year have occurred the first major changes in the personnel of the Board. In September 1951, Dr. John G. Darley resigned as secretary-treasurer. Dr. Darley had served faithfully and with distinction since June 1947. Dr. Noble H. Kelley was elected to succeed in this office. With this change, the executive office of the Board was moved from the campus of the University of Minnesota to Southern Illinois University, Carbondale, Illinois. During the year, the following members resigned: Dr. Marion A. Bills, Dr. John G.

Darley, Dr. David Shakow, and Dr. Carroll L. Shartle. They were replaced by Dr. Harold Taylor, Dr. Ruth S. Tolman, Dr. Austin Wood, and Dr. C. Gilbert Wrenn. Dr. Helen Peak served during part of the year. Only three changes in membership had occurred previously, since the original Board was elected in 1947.

The changes in personnel mentioned and the transfer of the office of executive secretary-treasurer indicate a major transition in the activities of the Board. By September 1951, all candidacies active under the provisions of the "grandfather" clause, which expired on December 31, 1949, had been reviewed. Presently, there are only 46 of these remaining for final action by the Board. Thus, the long and arduous work of evaluation of 1,556 "grandfather" candidacies comes to a close. The work of the Board moves into a new period, already under way, where both written and oral examinations are mandatory for the award of the diploma.

ACTION ON CANDIDACIES RECEIVED

To the date of this report, 1,678 candidates have applied for the diploma. Of this total group, 1,556 applied under the "grandfather" clause in which the Board had the option of waiving either its PhD requirement, its examination requirement, or both, if the candidate appeared qualified, on the basis of his work history, training, and endorsements. The remaining 122 applicants filed for the diploma under requirements in which Board written and oral examinations are mandatory parts of the evaluation of professional competence. Thirty-three of the total group were applicants holding membership in the Canadian Psychological Association, with which the Board established a working relationship for the review of Canadian psychologists who met the same professional requirements as members of the APA.

Table 1 presents a cumulative summary of Board actions on all candidacies received to the date of

¹ For publication of historical and legal references to the work of the board, the following citations are listed: The letter of July 3, 1947, sent by the Board to all members of the American Psychological Association; the official report of the Board sent to all members of the APA under date of March 1, 1948; the report to the members of the APA distributed in printed form at the September 1949 meetings of the Association; the "Statement of Policy Concerning Ethical Considerations and Practices" dated April 1952, and sent to all diplomates; the *American Psychologist*, with the following specific page references: Vol. I (1946), pages 37, 41-42, 164, 168, 473, 500-501, 503, 510-517; Vol. II (1947), pages 77, 182, 183, 192, 451, 476-477, 481, 491, 502, 519; Vol. III (1948), pages 66, 184, 388-390, 558; Vol. IV (1949), pages 57-58, 185-186, 366-367; Vol. V (1950), pages 56, 84-86, 207, 212, 577-584, 646; Vol. VI (1951), pages 99-100, 185-186, 465-466, 559, 620-625; Vol. VII (1952), pages 50, 167, 200.

the preparation of the present report (August 1, 1952).

The form of Table 1 and Table 2 in this report is so arranged that it is directly comparable with the tabular material presented in the 1950 and 1951 annual reports, which were published in the

TABLE 1

Summary of actions by the American Board of Examiners in Professional Psychology on all candidacies received to July 31, 1952

1. Diplomas awarded.....	1,088
a. Diploma awarded as first official action of Board.....	891
b. Diploma awarded after earlier decision not to award.....	156
c. Diploma awarded to members of the Canadian Psychological Association.....	13
d. Diploma awarded upon successful completion of Board written and oral examinations.....	28
2. Diploma not awarded with waiver of examination and/or PhD.....	222
a. PhD and minimal experience.....	38
b. MA and minimal experience.....	16
c. PhD and insufficient experience.....	82
d. MA and insufficient experience.....	86
3. Diploma not awarded because of moral or ethical considerations.....	12
a. Probationary cases.....	8
b. Candidacies rejected.....	4
4. Candidacies set aside as inactive.....	186
a. By refund of fee.....	97
b. For failure to appear for written examination	
(1) Set aside by one notice.....	34
(2) Set aside by two notices.....	52
c. For insufficient training.....	2
d. Written examination failed twice.....	1
5. Board actions not yet completed.....	170
a. Cases not yet reviewed.....	4
b. Cases under continuing study.....	49
c. Nongrandfathers waiting to get experience..	13
d. Canadians admitted to written examination..	3
e. Nongrandfathers admitted to written examination.....	15
f. Written examinations passed; oral examination pending.....	47
g. Written examinations failed; re-examination pending.....	27
h. Oral examinations failed; re-examination pending.....	12
Total*	1,678

* Of all applicants, 122 applied under the mandatory examination provisions of the Board. These 122 cases are found as follows: 25 in category 1d above; 2 in category 4a above; 11 in 4b2; 4 in 5a; 4 in 5b; 13 in 5c; 3 in 5d; 15 in 5e; 25 in 5f; 9 in 5g; 11 in 5h.

November issues of the *American Psychologist* for those years.

The first category (1a) of Table 1 represents 57% of all candidacies that were active under the "grandfather" clause. In these cases, the Board's first official action, after as complete an investigation as was deemed necessary, was the vote of the award of the diploma in the appropriate professional field, with waiver of the PhD requirement, the examination, or both.

In category 1b of the table are included 156 cases in which the diploma was awarded after earlier decision not to award. The award was made, in most instances, after appeal by the candidate and after the candidate had made a more complete documentation of his case and had furnished additional records for subsequent review by the Board.

Category 1c is the group of awards made to members of the Canadian Psychological Association who applied under provisions of the "grandfather" clause. At the time of the expiration of this clause, December 31, 1949, the Canadian candidates were given an extended six months for filing application. After appropriate clearance with a special committee of the Canadian Psychological Association, these Canadian candidates were reviewed en bloc at the September 1951 meeting of the Board. In preparation for this review, the liaison committee of the Canadian Psychological Association was of invaluable assistance to the Board.

Category 1d of the Table includes the group of diplomates whose diplomas were awarded upon the basis of successful completion of Board written and oral examinations. This group includes three candidacies that were active under the "grandfather" clause.

Of the total of 1,556 candidacies active under the "grandfather" provision, 68% were awarded the diploma with waiver of both written and oral examinations. The other 32% are accounted for in other categories of Table 1.

Category 2 of the Table includes two subgroups. The first subgroup (2a and 2b) are candidates, with or without the PhD, who met requirements as to the absolute minimum amount of experience, but the quality and breadth of whose experience did not, in the unanimous opinion of the Board, warrant waiver of examination. In every one of these cases, the candidate has been invited to attempt to qualify by satisfactory performance on

Board examinations. Of approximately 130 candidacies formerly placed in this first subgroup, 75

have been transferred in this report to category 4b. These 75 candidacies have been set aside for failure to appear for examination as prescribed by Board policy.

TABLE 2

Analysis of 1,088 diplomates of the American Board of Examiners in Professional Psychology as of July 31, 1952, classified by field, by highest earned degree, and by sex

	Number	Percentage	
		Of Total Group	Within Field
Clinical			
PhD			
Men	337	31	48
Women	223	21	32
MA			
Men	30	3	4
Women	114	10	16
			100
Counseling and Guidance			
PhD			
Men	146	13	66
Women	49	5	21
MA			
Men	18	2	8
Women	10	1	5
			100
Industrial			
PhD			
Men	144	13	89
Women	6	0	4
MA			
Men	11	1	7
Women	0	0	0
			100
Total	1,088	100	100
	Number	Percentage	
Number of diplomates			
Clinical Psychology	704	65	
Counseling and Guidance	223	20	
Industrial Psychology	161	15	
Total	1,088	100	
Diplomates by highest earned degree			
MA	183	17	
PhD	905	83	
Total	1,088	100	
Diplomates by sex			
Men	686	63	
Women	402	37	
Total	1,088	100	

The second subgroup (2c and 2d) includes 168 candidates, with or without the PhD, who, in the opinion of the Board, did not present the minimal amount of acceptable, qualifying experience in their total work records to permit the award of the diploma during the life of the "grandfather" clause. Candidates in this second subgroup may maintain their candidacy by meeting the following requirements: satisfactory endorsements, accumulation of five years of acceptable, qualifying experience, presentation of the PhD degree, and satisfactory performance on Board written and oral examinations.

In its 1950 annual report, published in the November 1950 issue of the *American Psychologist*, the American Board of Examiners in Professional Psychology assured the members of the profession that, at the conclusion of its individual review of all candidacies active under the "grandfather" clause, it would make a final review en bloc of all cases in which it had not voted to award the diploma with waiver of the PhD and/or examination requirements. This final review was completed at a meeting of the Board in January 1952. The review included 256 candidacies. In nine cases, the Board reversed its previous decisions and unanimously voted to award.

Three former members of the Board who resigned in September 1951, but who had participated from the beginning in the assessment and evaluation of "grandfather" candidacies, were invited to assist in this final en bloc review. In the discharge of its obligations to the pioneers in professional psychology, the Board was very much concerned that, in a final review, it would conduct a fair and just re-evaluation.

Category 3, while small in number, represents the most difficult set of candidacies with which the Board has had to deal. The American Psychological Association already is making progress in the formulation and development of a code of scientific and professional ethics and conduct for professional psychology. The Board hopes that, in the near future, psychologists will agree on a code of ethical and professional behavior that is realistic and enforceable. The problems of ethics and professional behavior transcend the interest of this

Board alone and involve the interests of the entire Association. The Board has established its own minimal code and in each instance sought legal opinion regarding its actions in the candidacies in this third group. Further in this report mention is made of "A Statement of Policy Concerning Ethical Considerations and Practices," which has been printed and distributed to all diplomates of the Board.

Category 4 represents candidacies which have been set aside as inactive. This category includes four groups. Ninety-seven candidacies have been set aside by refund of fees. Generally speaking, and for economic reasons primarily, the Board had to adopt a policy of not refunding candidacy fees in cases where the diploma was not awarded after processing and full review by the Board. In several instances, however, a refund seemed necessary. More detailed information on the basis for refund may be found in the 1951 annual report.

Eighty-five cases have been set aside as inactive for failure to appear for written examination. The Board's policy concerning examination privileges appeared most recently in the June 1952 issue of the *American Psychologist*, page 200.

Two candidacies have been set aside because of insufficient training. One has been set aside for failure of the written examination twice.

The fifth category of cases in Table 1 is self-explanatory. Within the past year, the number of cases "not yet reviewed" has been reduced from 39 to 4; and the number of cases "under continuing study" from 146 to 49. Thus, at the end of five years of functioning, the Board has almost completed its work on the 1,556 candidacies which were considered under the provision of the "grandfather" clause. Of this group, only 46 remain under continuing study. In these cases, the Board still seeks further information necessary to arrive at a final decision.

ANALYSIS OF DIPLOMATES

The Board has continued its policy of announcing in the *American Psychologist* the names of successful candidates for its diploma. These citations are included in the footnote at the beginning of the report. In the various directories of the APA, all diplomates, to the respective date of publication, appear in alphabetical order within the field of their professional specialty.

A general analysis of diplomates is presented

herewith in Table 2. This table shows the number and percentage of diplomates within each of the three professional fields, classified both by sex and by highest earned degree. It may be noted that since the 1951 report, which included 1,021 diplomates, an additional 67 diplomas have been awarded, bringing the present total to 1,088.

The field of clinical psychology is represented by the largest number of diplomates. Of all diplomates, 83% hold the PhD degree.

WRITTEN AND ORAL EXAMINATIONS

In November 1951, 32 candidates appeared for the third written examination, which was administered in 18 local examining centers. The fourth written examination is scheduled for November 13-14, 1952.

To date, 115 have taken the written examination. Of this group, 87 (76%) passed and have been admitted to oral examination.

The Board has adopted a policy of continuing revision of its written examination. For eligible candidates among French-speaking Canadians, a translation of the written examination into the French language was authorized. Canadian diplomates, fluent in the use of both the English and the French languages, undertook this translation assignment.

During the year 1950-51, the first and second oral examinations of the Board were conducted in Chicago and in New York City. Forty-two candidates participated in these two examinations. Of the 42, 67% were judged to have performed satisfactorily and were awarded the diploma.

At the time of the 1951 annual report, 23 candidates had passed the written examination and were awaiting an opportunity to take the oral examination. Following the third written examination in November 1951, the Board at its January 1952 meeting admitted 24 additional candidates to its oral examinations. These 47 candidates, together with 12 who previously had failed and had been waiting a second opportunity to take the examination, constituted a group of 59 candidates who were eligible for oral examination. This group was widely dispersed throughout the United States. If invited to a major examining center, such as Chicago or New York, the expense to the candidate, in many instances, would be unusually high. In view of this, the Board, after considerable study, developed a regional plan of partial examination,

with completion of the remaining parts at the time of the meetings of the national association. It was the concern of the Board to maintain maximum validity of its oral examination at a minimum of expense, both to the candidates and to the Board.

During the spring and summer of 1952, regional oral examinations were held in Minneapolis, Los Angeles, San Francisco, Topeka, and New York. Twenty-seven candidates completed the Field Situation and Part I-A, Diagnosis or evaluation, at these centers. Three candidates in industrial psychology were given the total examination in New York City. Twenty-four candidates registered for oral examinations scheduled for Washington, D. C. on September 2, 3, and 4, 1952. This group will be examined on Parts I-B, Therapy and/or recommendations, II-C, Skill in the interpretation and use of research findings, and II-D, Organization and administrative problems of professional psychology. Examinations on all four parts will be given in Chicago, San Francisco, and New York City in the Fall of 1952. Before the end of the present calendar year, all of the 59 candidates awaiting oral examination will have had an opportunity to complete all four parts.

Candidates who pass the fourth written examination in November 1952 will be invited to oral examination in the spring of 1953. The Board plans to make it possible for eligible candidates to complete both the written and the oral examinations within less than a calendar year.

The oral examination will continue to include a Professional Field Situation and the following four parts:

I. Client Relations:

A. Diagnosis or evaluation. (The definition of the psychologist's professional problem)

B. Therapy and/or recommendations. (The solution of the psychologist's professional problem)

II. Scientific and Professional Relations:

C. Skill in the interpretation and use of research findings. (What valid knowledge exists regarding professional practice)

D. Organization and administrative problems of professional psychology. (What are the conditions of professional practice)

Preparatory to examination on Part I-A, a field situation is set up in which the candidate has an opportunity to demonstrate his proficiency in a typical professional working situation. The Board attempts to prepare a field situation that is con-

sistent, as far as possible, with the usual professional practice of the candidate. Approximately one-half day is spent in the field situation.

For Part I-B, the candidate submits a sample of his recent professional work. This one sample may be a case history, a formal report, or a typescript of recorded interviews with clients or patients or of staff conference reports.

In Part II-C, the candidates are examined on the basis of a selected bibliography which is sent to them and to their examiners in advance of the examination.

Examination on Parts II-C and D is combined in one examining period with one examining team. Where Parts I-A and B are given at the same center, they, too, are combined in one examining period. Each examining period is one and one-half hours. Each examining team consists of three members. Two are diplomates in the candidate's field of specialization. A member of the Board serves as chairman and as third examiner.

For the conduct of its examinations, both written and oral, the Board has been most fortunate in the cooperation it has received from its diplomates. Many have served in administering and in reading and evaluating written examinations and as oral examiners. For this cooperation the Board is most grateful.

In preparation for future oral examinations, the Board invited over one hundred prospective oral examiners to a panel on ABEPP examinations during the week of the APA convention. In the months to come, the Board will continue to look to its diplomates and to other members of the science and profession of psychology for assistance in the conduct of its responsibilities for the evaluation of professional competence and the award of its symbol, the diploma.

CONTINUING BOARD POLICY

According to present Board policy, candidacies are classified as inactive under four different designations. (See Table 1, category 4.) Presently, failure to appear for written examination is the major cause for setting aside candidacies as inactive. Board Policy on examination privileges was announced in the May 1951 issue of the *American Psychologist*, page 186, and repeated in the June 1952 issue, page 200.

Present and future applications come under the policy of the Board dealing with the amount of

post-doctoral experience required of candidates. This policy is explained in detail in the October 1951 issue of the *American Psychologist*, page 559.

In May 1952, the Board adopted an amendment to its policy concerning examination privileges and examination fees:

If a candidate fails once to appear for a regularly scheduled written examination for which he has registered and local arrangements have been made by the Secretary-Treasurer, he shall pay an additional fee of fifteen dollars to be admitted to another written examination.

If a candidate fails twice to appear for a regularly scheduled written examination for which he has registered and local arrangements have been made by the Secretary-Treasurer, his candidacy shall be closed. To be reconsidered, the candidate must file a new application, which must be accompanied by a second candidacy fee of twenty-five dollars.

The announcement of this policy appeared in the August 1952 issue of the *American Psychologist*, page 482.

In April 1952 was printed a small booklet titled "A Statement of Policy Concerning Ethical Considerations and Practices." This statement is intended to serve as a reference and guide to diplomates of the Board. Copies have been distributed to all diplomates. In the future, a copy will be enclosed with each diploma.

FINANCIAL PROBLEMS

During the past year, the Board has given considerable thought to the problem of financing its

work in the future. Within the coming year, its financial reserves will have been spent. New candidacy fees will not be sufficient to cover current operating costs. Additional sources of income must be found in the immediate future.

CONCLUSION

The records of the Board are examined annually by qualified auditors. These annual audits of the Board are open for inspection at the office of the Secretary-Treasurer, as are the policies of the Board recorded in the official minutes of Board meetings. The Board is ready at any time to make available to the APA membership any information, except that of a confidential nature, which will assist in the understanding of its operations.

An announcement listing the new officers and members of the Board after the official meeting, which was held in September 1952, appears in this issue of the *American Psychologist*, page 702.

CARLYLE F. JACOBSEN
NOBLE H. KELLEY
GEORGE A. KELLY
JEAN W. MACFARLANE
HAROLD C. TAYLOR
RUTH S. TOLMAN
DAVID WECHSLER,
AUSTIN B. WOOD
C. GILBERT WRENN

THE CASE FOR AND AGAINST MALPRACTICE INSURANCE FOR PSYCHOLOGISTS

APA COMMITTEE ON MALPRACTICE INSURANCE

THE present structure and functioning of the American Psychological Association are based on the proposition that psychology is both a science and a profession and that the professional activities and concerns of members of the Association occupy a place of equal importance along side of their scientific activities and concerns. Therefore, with a growing number of psychologists currently expressing a wish to be able to obtain so-called malpractice insurance,¹ the Association has an obligation and a desire to explore this problem and to foster whatever developments will most adequately serve the purposes of all concerned.

Preliminary study of the problem shows, however, that it is exceedingly complex and "thorny," and the present article is prepared with a view to bringing all sides of the issue to the membership at large. Members of the Association are urged to communicate their views and recommendations, directly or through national, divisional, or state association officers, to the Committee. On the basis of such communications and further study of the problem, the committee will later make specific proposals for implementing the Association's needs and wishes.

BACKGROUND

From time to time during the past three years, the Newsletter of the Division of Abnormal and Clinical Psychology (APA Division 12) has carried brief reports indicating growing interest on the part of local groups of psychologists in the possibility of obtaining malpractice insurance. The following report of a committee of the Los Angeles Society of Clinical Psychologists in Private Practice is an example:

¹ This term, when taken literally, is something of a misnomer. Malpractice insurance is obviously *not* designed to "insure malpractice." Instead it is designed to give persons with crucially important professional skills the security needed to exercise these skills without paralyzing fear of legal action which might be brought against them by unscrupulous clients or by clients who claim damages as a result of admissible human error. For example, virtually every physician carries insurance of this kind.

Most professional people have, at one time or another, felt the need for malpractice insurance. Psychologists are no exception. Such insurance might be considered as a legal retaining fee, that is, the premiums purchase legal aid as well as financial coverage in legal actions which might be brought against the psychologist.

Present Status: As near as the committee could determine, there is no insurance policy written specifically for the psychologist. Some psychologists have obtained malpractice coverage under a medical-type policy written by Lloyds of London.

Proposal: Lloyds are interested in developing a policy designed specifically for psychologists. However, since they have had no experience with such a policy, they made the following proposal: (a) They will write a group insurance policy for a minimum of 25 psychologists. (b) It will be for 3 years. (c) It will provide malpractice (\$10,000-\$30,000) and liability and property damage (\$5,000). (d) It will initially read like the standard medical policy. However, as soon as the arrangements have been consummated, their representative will meet with a committee of the insured to draw up a policy specifically for psychologists. When this is mutually satisfying, the new form will take the place of the old. This procedure will satisfy the company of psychologists' intent to buy the insurance, and will provide the psychologists with immediate coverage.

Costs: Individual coverage is now available for about \$60 per year. The group cost for comparable coverage will be \$100 for 3 years, or \$33 figured annually. It may be anticipated that there might well be a reduction in costs thereafter.

Organizational Implications: In order to take out such a group policy, there must exist a formal organization with responsible officers. The organization becomes responsible for the payment of premiums in case of individual default. As a corollary, only members in good standing are eligible for this insurance. Thus, if a member drops or is dropped from the rolls, his insurance is automatically cancelled. This, then, might be a mild economic tooth in the application of sanctions in cases of ethical or professional violations. Only one Master policy may be issued to an organization. (Division 12 Newsletter, August, 1950, pp. 11-12.)

Then, at the February (1952) meeting of the Executive Committee of Division 12, that division's Committee on Private Practice included in its report the following recommendation:

As psychologists come to assume more and more responsibility for diagnosing and treating patients and clients, both in institutional work and in private practice, it is es-

sential that they be enabled to obtain malpractice insurance if and when they desire to do so. Experience in this respect has so far shown that such malpractice insurance cannot easily be obtained by isolated psychologists, and that it is not even easy to obtain it on a community-wide or state-wide basis. Consequently, this Committee recommends that the Division of Clinical and Abnormal Psychology urge the APA to make arrangements with a suitable insurance company under which all members of the APA who wish to take out malpractice insurance may be enabled to do so at reasonable rates.

This recommendation was transmitted to the APA Board of Directors at its March meeting (at Ann Arbor, Michigan), with the result that President Hunt was authorized to appoint a special committee "to explore the advantages and limitations of so-called malpractice insurance and report to the Board before its September meeting." The present article is a part of the resulting committee's report to the Board of Directors and is published with the approval of that body and of the Council of Representatives.

COMMITTEE VIEWPOINTS

The Committee on Malpractice Insurance, as presently constituted, consists of psychologists who, in one capacity or another, have given considerable thought to the insurance issue. Excerpts will therefore be quoted here from the various positions and points of view initially represented by the members in letters to the Committee's chairman. One member summarized his position in these words:

My immediate reaction to the subject is fairly clear in that I strongly favor any steps which will tend to move the profession toward a more firmly recognized status by both government and the public. It seems to me that a plan of this sort adds just another small increment to the growth of the profession.

In the initial memorandum which went out to committee members, they had been asked, among other questions, whether their tentative preference would be for having the insurance problem handled on a strictly local basis, or by state societies, by APA divisions, by the APA as a whole, or by the American Board of Examiners in Professional Psychology. One member replied as follows:

It is possible that several of APA's Divisions could handle the problem, but it would seem to me to be less efficient than to make it a central office venture. Furthermore, in years to come, it is likely that every division will be represented by having one or more insured members. If a central office set-up is organized now, it would save having to shift from a divisional set-up later. Since it looks like

it would eventually be an all-APA responsibility eventually, I am in favor of organizing it centrally right from the start . . .

Using ABEPP as the agent for group insurance strikes me as too limited. ABEPP could not logically assume responsibility for non-diplomates; yet a fair proportion of non-diplomates would presumably need such insurance. Of course, more favorable rates might be eventually obtained if only ABEPP members were insured; however ABEPP requires 5 years of experience other than teaching for its diploma. This would leave a 5-year hiatus without insurance for ABEPP aspirants.

Using the State associations as individual agents, I believe, would not work out at all well. First of all, several states do not have state societies and most states could not get 25 or more members who desired insurance. Thus I keep returning to the need for having a central office arrangement.

Another member took a very different position:

I am of the opinion that private practice should represent a culmination of professional activity after demonstrated competence to assume independent responsibility. Yet in many instances it is [today] undertaken by comparative novices. The APA should not directly or indirectly support or condone such practice.

Having made a check of the qualifications of a sample of psychologists listed in the APA *Directory* as engaged in private practice, this member goes on to say:

Out of this group only two are established psychologists with diplomatic status. Others of this group are the ones more likely to need malpractice insurance because they are more likely to make errors in judgment in accepting clients and in recognizing their limitations in practice.

If malpractice insurance is sponsored by the APA, it indirectly implies professional sanction by the Association of the individuals who are covered by it. If such action proves feasible by the APA or APA divisions, it should be restricted to those whose objective qualifications at least meet standards for Fellowship status. In my opinion, it should be restricted to diplomates in their respective areas of specialization. I think therefore that if malpractice insurance is sponsored by the APA it should be under the aegis of ABEPP.

In the initial memorandum sent to them, Committee members were asked if they thought malpractice insurance would tend to increase the amount of litigation against practicing psychologists. One member replied:

I . . . think that knowledge that such insurance is carried by a psychologist would be likely to encourage disgruntled clients to bring suit. In fact, it might encourage maladjusted clients to expect unwarranted progress in therapy. The fact that less scrupulous practitioners are protected against such suits may also have a deleterious rather than a desirable effect on their professional ethics.

A somewhat different viewpoint was expressed by another member thus:

My feeling is that such protection is necessary and that the only currently suitable agency for making the necessary arrangements is the APA. It seems to me that no one will be encouraged to enter private practice simply because he is offered such protection. Those who enter private practice do so because of the financial gain and, presumably, because they like private work. Anyhow, they can currently obtain malpractice insurance, though at twice the cost of group rates.

One of the questions raised when this issue was discussed by the Board of Directors was whether "group insurance" would be preferable to insurance obtained by a group from a commercial company. One member comments on this question as follows:

As for the possibility of arranging a non-commercial "group protection" plan, I spent a little time talking to a lawyer and an economist about it. The idea of having the members pool their payments and use the pooled monies to defend or pay claims was declared not feasible by them. Their belief is that we have nothing to guide us in the matter. We do not know what claims would be made, the amounts involved; we have no nation-wide legal set-up nor do we have a large capital reserve available to fight off claims. Further, if the APA were the sponsor, an omnibus suit could tie up all of APA's funds so that not a single check could be issued until the suit was settled. Their feeling was that such a venture was fraught with much danger. If we had 10,000 members desiring insurance, it would be a different matter. But if we had that many applicants, the commercial rates would probably drop also. Thus the gain would be small.

One member of the Committee feels that the actual need for malpractice insurance by psychologists may be over-estimated. This member says:

My first question is whether there are any known instances of suits for malpractice? And if so, the number, nature, and outcome.

In twenty years of essentially private practice . . . I have had no occasion arise which suggested the desirability or need for such protection.

AN APA MEMBER'S VIEWS

The June (1952) issue of the Newsletter of Division 12 carried a notice regarding the appointment of the present committee and inviting readers to correspond therewith. Of the resulting letters, one discusses the problem so thoroughly and so thoughtfully that it is reproduced here with only minor omissions.

I am strongly against APA's entering into any formal contract with Lloyds of London, or any other insurance agency, for group coverage of all APA members in regard

to malpractice insurance. In my opinion this would be disastrous. At the same time I feel that some official organization of psychologists should take this action. I feel that the same procedure and philosophy as that which established ABEPP should prevail here, i.e., sponsored by but independent of APA.

Psychology is not solely a professional organization like AMA, nor is it basically a policing outfit for practitioners. The APA is an organization of like-minded and like-trained individuals with common interests in a professional area and common concerns with the basic science of psychology. All this is reflected in the statement of purpose of APA.

As psychology moves to assume its basic responsibilities in the society in which it lives, grows, and has its being, it is inevitable that problems of a strictly professional nature appear in greater profusion, and these must be met head-on. To their credit, the State associations are accepting readily many of these responsibilities, and in my opinion these units represent the appropriate primary elements for such professional direction.

Should APA enter into a national contract open to all of its members with a company like Lloyds for malpractice insurance I foresee some or all of the following consequences:

1. Claims will as a general rule be made not against the highly trained and ethical members of APA but against the fringe group;

2. This fringe group will be defended, in a series of individual legal actions, as "psychologists." They will have to be recognized as psychologists because they are part of a legal contract, and they will represent "Psychology" in a public way;

3. This fringe group includes—whether we like it or not—individuals who are crackpots to say the least, criminal psychopaths to say the worst;

4. The issues taken to higher courts in insurance matters will not involve highly ethical and reputable psychologists but will involve the relatively untrained, litigious, entrepreneur, semi-psychotic, etc., types of individuals;

5. The future legal range and function of psychologists, their scope and freedom, will be defined to an undue degree in terms of these individuals who represent most poorly the psychological profession as a whole, but whose legalistic proclivities and perseverance will to very considerable degree have this effect;

6. The attendant publicity on such cases—and by their nature such cases and such personalities will have extensive publicity—can do nothing but reduce in disastrous measure the prestige of a field now enjoying an enviable reputation as a well-motivated socially-oriented scientific and professional group;

7. The APA itself will be the subject of bitter letters of recrimination from such individuals (for failure to put the entire support of the APA actively behind the individual case or cause); and even if such support is forthcoming it will not prevent such recriminations. More than this, the APA will find itself the defendant in legal actions for failure to provide the degree of support which a distorted personality and mentality considers proper.

To turn to the other side of the picture, I feel it is important that some responsible and official group of psy-

chologists undertake contracting on a group basis for malpractice insurance. But not for *all* members of APA. There are not a great many psychologists in full-time private practice. The major pattern in our field seems to be for individuals to have a basic, salaried position, in a university, business, or agency, with some degree of private practice. To a not inconsiderable measure this is in response to community pressures; and it represents, to my way of thinking, a very desirable pattern of life for American psychologists at the present time. At least it exists. Consequently, a fairly high proportion of psychologists who are members of APA feel some *small* need for—or to put it differently, would *feel better with*—that degree of protection provided by malpractice insurance.

The question therefore resolves itself into one of *what* psychological agency should be the business agent in contracting with an insurance firm, and for which members of APA. I am certain the agency should *not* be the APA. The only other official body, sponsored by but independent of APA, is ABEPP. Throwing the burden of malpractice insurance on ABEPP would create problems for that agency against which their past difficulties would seem small. Nevertheless I would favor asking ABEPP to undertake such responsibilities, with freedom for ABEPP to (a) reject, (b) accept on an exploratory basis, (c) accept and ask APA support in the necessary expansion of personnel, powers, and other support as needed.

I would be in favor of ABEPP seeking to write a policy with Lloyds which would be applicable only to diplomates, or to other equivalently-trained psychologists in non-applied fields who felt the need for such insurance.

Such a policy on the part of ABEPP would of course exclude large numbers of members of APA from malpractice insurance. I do not think this would be a bad thing. It would serve notice, on a business basis, to any interested business firm—as well as to the public as a whole—that in the opinion of the psychological profession the independent private practice of psychology (in whatever field) did indeed and in fact require a high level of training.

Certainly 25 or more diplomates could be found for the purpose of writing the initial contract. If the number of diplomates (or equivalently-trained in *non-applied* fields) never became so large as to allow for a reduction in insurance rates, I am sure that all responsible psychologists would be willing to endure the higher rates. As a matter of fact, over a period of years the extremely low number of claims would probably do more to reduce eventual rates than the mass insurance of *all* APA members (entailing a much larger number of claims and expensive legal battles).

I do not believe that members of APA other than diplomates (or others with equivalent training in non-applied fields) ought to be engaged in independent private practice, or assume equivalent responsibilities, in the name of psychology.

Should other individuals, through such groups as the New York Society of Clinical Psychologists in Private Practice, want to seek their own arrangements with Lloyds, or some other insurance firm, they would of course be free to do so. But if they did, it would be as a side issue and not as a formal official action of the APA. It would be an extra-APA matter.

The formal official action by APA and/or by ABEPP, setting up the machinery and the contract for *responsible* psychologists, would place APA in a position where it did *not* have to defend such members of non-APA contract arrangements as *psychologists*.

THE NEW YORK AND LOS ANGELES PLANS

The New York Society of Clinical Psychologists has a Committee on Malpractice Insurance which has recently negotiated a contract with a joint group of four British insurance companies. The chairman of this Committee, Dr. Jack Z. Elias, has prepared the following statement concerning this contract.

The New York Society of Clinical Psychologists is now making available to its members the opportunity of joining in a group malpractice insurance plan. Of interest particularly to those engaged in psychotherapy and counseling, the plan at a cost of \$50.00 per year covers the insured psychologists against suits alleging malpractice. The insurers provide legal service and may not settle without the consent of the assured. The limits of the liability are \$10,000.00 for one case and \$30,000.00 for all claims per year against the psychologist. Also included in this protection without extra charge is any designated technical assistant to the psychologist such as a psychometrician.

A member of the present committee has also received the following information concerning a similar development in Los Angeles.

Dr. Maurice Rapkin, who is Chairman of the Committee on Legislative and Public Relations of the Los Angeles Society of Clinical Psychologists in Private Practice, informs me that the firm of Schneider and Bricker of 2324 W. Eighth Street, Los Angeles 5, California, will write malpractice insurance for any APA member. This firm represents Lloyds of London; and the rate is \$49.38 per year for from \$5,000.00 to \$15,000.00 coverage.²

The existence and operation of these two plans raise certain questions. Do they represent a pattern that should be encouraged and extended? Are these plans less desirable than some other that might be evolved? Would it be feasible to have a variety of arrangements whereby malpractice insurance might be obtained?

EXPERIENCE WITH THE NEW YORK AND LOS ANGELES PLANS

Having read the announcement in the June (1952) issue of Division 12's Newsletter concerning the creation of the present committee, a member of the Los Angeles Society of Clinical Psy-

² These facts have been confirmed in letters from Dr. Rapkin and Mr. Bricker, of Schneider and Bricker.

chologists in Private Practice wrote to the committee as follows:

First, I think that malpractice insurance for the private practitioner is desirable for the following reasons:

1. There is a realistic need for such protection against the possibility of financial loss. Although there is no case on record of a successful suit against a PhD either in this country or in Europe, there is always the possibility of a first time—particularly here in Los Angeles, where, in recent years, MD's have been sued with increasing frequency and for decreasing provocation.

2. Since we are not licensed, the independent practitioner may have a sense of being in a vulnerable position. This may reflect upon his therapeutic relationship with his patient in a number of subtle ways—particularly in the handling of aggression—to the detriment of the treatment.

3. Even with unsuccessful suits, an uninsured psychologist will have to devote considerable time to his legal defense, at the expense of his practice. An insured psychologist can leave the entire matter in the hands of the underwriting attorneys.

Second, I think that the present insurance rates are much too high (cf. those quoted on p. 6-7 of the Newsletter of June 1952). One means of reducing such rates would be for a larger organization to handle it on a group basis. The LASCPPP is too small to obtain group rates. Schneider & Bricker tell me that at present they are writing individual policies only, in order to gain some experience with this type of insurance. They feel that it will be possible to lower the rates substantially soon.

Third, as far as which group should handle the insurance, my vote would be for the State organizations. If this insurance were made available *exclusively* to qualified members, it might serve as a limited control on non-qualified people entering private practice.

When a member of the New York Society of Clinical Psychologists read a preliminary draft of the present report, he wrote this letter to the committee:

I am rather surprised at some of the objections to malpractice insurance expressed by some of the members of the Committee and by the APA member whom you quote, and feel that some of these objections are based on misleading conceptions of just what malpractice insurance is and how it works. I should like to list a few of these misconceptions.

1. It is assumed that group coverage necessarily implies that the APA itself would enter into a contract with the insurance company, that it would cover all its members by this contract, and that it would have to certify the competence of all the members who were covered. This is hardly true: since in the policy that the New York Society of Clinical Psychologists, for example, has arranged with a group of British insurance companies, the Society is actually only a negotiator of the contract; while it is the *individual members* who are covered. Moreover, only those individual members of the Society who express a definite wish to be covered, and who sign individual agreements

with the insurance company, are actually covered. Again: the Society merely certifies to the insurance company that the members who take out contracts are members in good standing of the Society; it in no wise certifies their degree of competence.

2. It is assumed that claims for malpractice insurance would largely be made against APA members who are in a "fringe group" and that their defense will necessarily be considered a defense of "psychology." Actually, there is no evidence to show that "fringe" psychologists will be sued for malpractice liability any more than more respectable psychologists will be. One of the main reasons for taking out malpractice insurance is not because a psychologist actually engages in unethical, crackpot, or criminal activities but because, by the very nature of psychological activity, many clients or patients (and their relatives) are disturbed, crackpot, and unethical individuals (not a few of whom have downright paranoid and/or psychopathic tendencies) who may easily sue *any* psychologist, including the most reputable ones, for malpractice. Moreover, reputable psychologists have excellent reasons for taking out malpractice insurance, not because they need fear losing suits for malpractice, but because even when they win such suits they invariably stand to lose considerable time and trouble successfully defending themselves. The main advantage of malpractice insurance, perhaps, is that not only does the insurance company take upon itself the full defense of the suit against the individual psychologist, but that its lawyers are generally experienced enough to settle the great majority of suits *without* their ever getting into court. This means that psychology as a whole is generally protected from adverse publicity. If, on the other hand, a psychologist does not have this kind of protection, a suit against him is far more likely to come to actual trial; and then, whether or not he is a member of the APA, and whether or not he is a member of some "fringe group," the chances are at least nine out of ten that he will appear as a "psychologist" in court and in the public press, and that psychology will hardly be benefited. To assume, therefore, that if an APA member gets protective insurance through the APA this will make him more of a "psychologist" in the public eye seems unlikely.

3. It is assumed that the future legal range and function of psychologists will be defined to an undue degree in terms of the relatively untrained, litigious, entrepreneur-like, semi-psychotic psychologists who will be most often sued for malpractice. But if this is true then those who fear this eventuality should certainly be heartily in favor of malpractice insurance. For without such insurance, cases like the feared ones will more often come to court and be more badly defended; with such insurance, they will come to court less often and will be better defended. The basic false assumption of this kind of thinking seems to be the assumption that malpractice insurance will lead to *more* suits against psychologists than now exist. This is most dubious; since the whole practice of such insurance seems to show just the opposite. I spoke to a lawyer about our insurance problems in New York State and he heartily advised every psychologist to get such insurance, and said that the legal profession itself is now taking up such insurance. His main reason was that whenever a potential

plaintiff (and his lawyer) discovers that his prospective defendant has malpractice insurance, he usually is much more loathe to sue. It is those practitioners who do not have such insurance who are more quickly sued. If so, and if suits against psychologists are not likely to do us any good in terms of the future legal range and function of our practice, then we should certainly approve of any insurance plan that will tend to forestall such suits.

4. It is assumed that if the APA sponsors malpractice insurance, the APA will be forced to support the cases or causes of "fringe" psychologists who are sued for malpractice. But this is exactly what is forestalled by insurance: since members who have insurance will be backed up solidly by the insurance company, and will not feel as constrained to call on the APA for help as they might otherwise feel. At the present time, when few APA members have malpractice insurance, they are much more likely to call on the APA for help if and when they are sued than they probably would be if they did have such insurance.

5. It is assumed that disgruntled clients or patients who know that psychologists have malpractice insurance may be more likely to bring suit because of this knowledge. There seems to be no evidence to support this assumption. To my knowledge, most physicians carry malpractice insurance; and their carrying or not carrying such insurance has never been shown to be related to the number of suits brought against them. As I noted above, the legal opinion I obtained seems to indicate that malpractice insurance may well deter instead of encourage suits against individuals carrying such insurance.

The foregoing are my personal reactions to some of the objections to malpractice insurance outlined in your report and the accompanying letters. Since the report in its present form stresses these objections, I should like, if possible, to see some of my objections to the objections also included in it when it is finally presented to the APA Board and Council.

A LIFE-INSURANCE PSYCHOLOGIST DISCUSSES THE REPORT

A copy of one of the early versions of this report came into the hands of an APA member who is employed by one of the large American life insurance companies. He discussed it with a lawyer employed by his firm and wrote the following letter to the Committee:

The thoughts which I wish to pass on for your consideration in connection with the report on malpractice insurance are seven in number. I gathered these from conversation with one of our lawyers, but the thoughts as I give them to you should certainly not be taken as official in any way.

The first thought is that malpractice insurance apparently is not good business (from a profit and loss standpoint) from an insurance company's point of view. This could be irrelevant to the nature of your report, yet it is a factor which must be considered in the willingness or, rather, the lack of willingness on the part of many American com-

panies to undertake the writing of malpractice insurance for psychologists.

The second thought which I picked up is that there are now an insufficient number of cases in litigation for an insurance company to determine just exactly what the liability of a psychologist may or may not be. It is difficult enough in the Medical Profession, and we would certainly present to the insurance companies a much harder problem in this respect than most any of the problems in medicine. Just what is the liability of a psychoanalyst, for example, and how do we determine (or how does anyone determine) whether he is guilty of malpractice or not?

The third thought is that malpractice insurance actually breeds litigation. This would adversely affect uninsured psychologists because those who would bring the suits would not make a distinction between psychologists who carry malpractice insurance and those who do not. Therefore, if it were known that malpractice insurance were available, it is possible that this would bring much litigation upon those who do not happen to carry it.

The fourth thought is that most companies would not wish to write malpractice insurance in a field in which it would be necessary for them, as implied in the report, to deal with "crackpot" plaintiffs or defendants. It might be possible, therefore, to reword the report to eliminate this implication. However, if this is, in fact, the case, this is a factor which will make it difficult for any American company to be very enthusiastic about taking unto itself the job of writing malpractice insurance.

The fifth thought is that a malpractice case cannot be settled without the client's consent. Therefore, the suit must be defended. This is time consuming and does not relieve the insured from spending his own time (as the statement given on page 11 might imply) in his own defense. The reason that the suit would have to be defended, and this would be costly in terms of time to the defendant, is that a settlement out of court frequently implies guilt on the part of the defendant. Psychologists will probably behave, in this respect, as our brother medics and will not want cases settled out of court. This puts malpractice insurance in a light different from that of property damage and liability on automobiles, for example, because in most of these latter cases the insurance company has the option to make a settlement, if it deems it wise, out of court. The entire gist of this argument is that practically every case will end up in court. And this will be time consuming and, therefore, expensive to the defendant no matter how innocent he may be of the charge in question.

The preceding thoughts suggest one that is more nearly my own, and that is that your Committee seek the counsel of malpractice lawyers in several of the American insurance companies. Perhaps you have done this already, but it occurred to me that there are many wordings in the report that might be changed somewhat if this additional counsel were secured. I do not object to our having to deal with Lloyds of London, but it seems to me that it would be much better if we could eventually interest a number of American companies in writing malpractice insurance for psychologists if, indeed, we can make out a case for its desirability. I believe that you would find that a number of

the companies writing malpractice insurance would be quite willing to give of their counsel in the preparation of your report and do this without any obligation with respect to business that may or may not accrue to them as a result of their counsel.

My last thought is that if it is in fact impossible to arrange for the writing of malpractice insurance for psychologists, it would be wrong to stir up interest on the part of our professional colleagues to want something that in the very nature of the case they cannot get. My thought, then, is that the insurance companies be approached first and that a report be written which will take into account as nearly as possible their views. This I think would make it more nearly likely that eventually they would be willing to write malpractice insurance for psychologists if at all feasible rather than if we stir up much interest (perhaps much of it ill informed interest) on the part of our members. This latter approach would, I believe, put a number of companies on the defensive and I see no reason for suggesting such an attitude in the first place.

I find that my thoughts run to eight rather than to seven, so if you will bear with me I will pass along one more. This is that there are a number of views expressed in the report (not those of the Committee itself) which I think are definitely wrong. An example would be that an organization of psychologists would be responsible for the acts of any one of its members. I believe that malpractice insurance is written for each individual member who may want it and the purpose of specifying some organization is merely a means of defining to the insurance company all the persons that are to be insurable under the terms of a contract. In other words, membership in an organization serves as the means of defining who is and who is not a psychologist. My main point is that if there are such views of individuals that are erroneous, I should think it would be much better to leave such views out of the report.

I do not wish to throw cold water on the interest in malpractice insurance, but I felt that it would be only fair to you to pass on to you the reactions which I secured from someone who is actually in the business of writing malpractice insurance for other professional groups.

WHAT IS "MALPRACTICE"?

The foregoing exhibits and letters of comment suggest a number of paradoxes which the Committee will not attempt to resolve in this report. One such matter should, however, be briefly considered. Since very few states as yet have laws which specify what the "practice" of psychology shall be (i.e., licensing), one may be left wondering, as some of the foregoing comments suggest, how "malpractice" can be defined, legally. It is therefore of some interest to see how this matter is handled in the policy now available to members of the New York

Society of Clinical Psychologists. This policy reads, in part, as follows:

... and resulting from any claims or suit, including actions of replevin and counterclaims, based solely upon malpractice, error, negligence or mistake, breach of implied contract, loss of services, property damage, autopsies, inquests, personal restraint, the dispensing of drugs or medicines, assault, slander, libel, undue familiarity, anesthesia, hallucinations, or malicious prosecution—all the foregoing being hereinafter known as "Malpractice."

The dilemma posed above is thus handled by defining "malpractice" mainly in terms of actions in which a psychologist might be expected *not* to engage (or actions of which he is falsely accused), without exactly stipulating the nature or scope of his legitimate professional operations as such. How this solution will work out remains to be seen.

The related question of what bearing, if any, the adoption of an ethical code or codes by psychologists may have on the conception and definition of "malpractice" is one which the Committee wishes to study in some detail.

SUMMARY AND RECOMMENDATIONS

Because of its novelty, complexity, and controversial nature, the question of malpractice insurance for psychologists needs to be widely considered and investigated in order that a consensus can be reached as a basis for practical action.

The present committee therefore urges members of the American Psychological Association to become informed regarding the nature of the problem and to express their opinions and wishes to the Committee or to their state, divisional, or national officers.

In the meantime the Committee will continue to study the problem and will seek technical legal advice and information from insurance experts. It is hoped that in a later report the Committee will be able to submit one or more specific plans to the membership and the governing bodies of the Association.

APA Committee on Malpractice Insurance

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THE VA PROGRAM FOR COUNSELING PSYCHOLOGISTS

B. V. MOORE AND LORRAINE BOUTHILET

American Psychological Association

SIX years ago the Veterans Administration inaugurated a program for the training of clinical psychologists. At that time the APA was asked to evaluate graduate training facilities in clinical psychology in institutions throughout the country and to advise the VA of those universities which were considered suitable for this type of training. The VA has now established a similar program for the training of counseling psychologists and has again asked the APA to cooperate by providing a list of universities qualified to offer doctoral training in this specialty.

The Education and Training Board's Committee on Doctoral Education considered the VA's request and made a series of recommendations to the APA Council at their meeting in September. The Council voted that all the recommendations be accepted. (See proceedings of the 1952 meetings in this issue, p. 647.) In order that APA members and, especially, university departments offering doctoral training may have more information about the Council's action than is contained in the proceedings, this article on the new VA program and on the Council's action has been prepared. It presents a brief outline of the program and summarizes the essential points in the recommendations accepted by the Council.

THE TRAINING PROGRAM

The administrative arrangements of the new program are essentially similar to the VA program for training in clinical psychology. It is a doctoral-level program in psychology with trainees appointed on a part-time basis with the VA while engaged in their academic work. The Civil Service job title is "Counseling Psychologist." At the present time all VA counseling psychologists will be appointed to positions in VA Neuropsychiatric, TB, and General Medical and Surgical Hospitals.

The VA counseling psychologist is expected to:

Apply psychological principles, techniques, and instruments to the evaluation, counseling, and placement of hospitalized individuals.

Administer and interpret tests of intelligence, achievement, aptitude, and personality.

Carry out group or individual counseling when requested by the patient and attending physician.

Confer with all professional staff members regarding individual cases under treatment.

Conduct research in the field of vocational counseling and placement as well as upon problems of evaluation, counseling, and placement.

Evaluate and counsel individuals having disabling or handicapping conditions as related to possible employment.

Assist and motivate patients to accept vocational and rehabilitative goals.

Supervise and instruct trainees in the counseling field and collaborate in the orienting of other professional hospital personnel such as psychiatrists, physicians, social workers, and nurses.

Plan, direct, and coordinate the vocational counseling program or perform other administrative duties.

Consult, when necessary, with universities, other agencies of the local, state, or federal government, and outside groups, upon problems involving any of the areas described above.

The training program, like that in clinical psychology, takes at least four years of graduate study, and the responsibility for the trainee's satisfactory completion of his doctorate rests with the university. During his graduate work the trainee receives about two years of paid practicum experience in VA hospitals where qualified counseling psychologists are stationed.

Representatives of the APA Division of Counseling and Guidance were consulted by the VA when plans for the program were made, and the VA expects to work with this Division in developing the program. Those interested in further details about the program may obtain them by writing to Dr. Robert S. Waldrop, Chief, Vocational Counseling, Professional Services, Department of Medicine and Surgery, Veterans Administration, Washington 25, D. C.

THE COUNCIL ACTION

Upon recommendation of the Education and Training Board, and with the concurrence of the Division of Counseling and Guidance, the Council took several steps to cooperate with the VA. Some of these actions were concerned with the long-range problem of evaluating training facilities in counseling psychology; others were necessitated by the fact that the VA needed a list of approved schools at the earliest possible time, to permit the program to get under way during the academic year 1952-53.

The Interim List. Because speed was necessary, the Council decided to provide the VA with an Interim List of schools temporarily approved for the academic year 1952-53. In order to facilitate preparation of the list, the schools on this Interim List are limited to those now on the list of universities approved for training in clinical psychology because most of the necessary information on these universities was already in the E & T Board files. However, the fact that a university has been approved for clinical training does not necessarily mean that it is also approved for counseling training. Universities on this list have been invited to furnish information regarding their counseling training—if they wish to participate in the new VA program—and on the basis of this information plus the information available in the Education and Training Board Files, the Interim List has been compiled by the Committee on Doctoral Training of the Education and Training Board. In making its evalua-

tions of counseling training, the Committee has been guided by the "Recommended Standards for Training Counseling Psychologists at the Doctoral Level," prepared by a committee on the Division on Counseling and Guidance (*Amer. Psychologist*, 1952, 7, 172-181). This Interim List is intended solely for the VA counseling training program. It has no implications for the training of counseling psychologists in general. It is quite probable, also, that this first Interim List will be supplanted within a few months by another list based on broader evaluations. If the APA Board of Directors authorizes it, the list will be published.

The Permanent Plan. In addition to preparing the Interim List, the Education and Training Board is proceeding to develop a permanent plan for providing the Veterans Administration with a list of universities approved for training VA counseling psychologists. This plan will, in all likelihood, not require that universities approved for training in counseling must first be approved for clinical psychology. In drawing up its plan, the Education and Training Board will consult with the Veterans Administration, with representatives of the Division of Counseling and Guidance, and other groups interested in counseling psychology.

A report on the permanent plan will be presented to the APA's Board of Directors next spring, at which time the Board will decide whether to terminate the Interim List and substitute a regular permanent program.

ANNUAL REPORT OF THE EXECUTIVE SECRETARY: 1952

FILLMORE H. SANFORD

American Psychological Association

THERE seem to be no rules, regulations, nor traditions concerning the Annual Report of the Executive Secretary. That there shall be such a report is established, but each year there must be a new decision about its form and content. The report could be a straightforward summary of the Association's activities, but such a report would represent a horning-in on the business of the Treasurer, the Recording Secretary, and the chairmen of our various committees. It could deal with the big things—over-all pictures and inclusive generalizations. But there is some reason to believe that anyone daily involved in APA affairs will lack the proper perspective for such a report. If anyone is interested in a philosophical understanding of an octopus, it is doubtful that the most objective information can be obtained through an interview with him who is intimately wrestling with one.

There is a way out of this conflict, however. APA is an intricate organization. It can be viewed from many different angles. Where the Treasurer reports on financial things, the Recording Secretary on governmental things, I will report on unique things—unique APA events and accomplishments during the past year. Then I will present some recently tabulated facts about psychologists.

The Association has completed the most intricate year in its history. Not only does our size continue to increase at a very rapid rate but, principally because of the fact that psychology as an entity is interacting in an increasing variety of ways with its supporting culture, the organization steadily increases in complexity. An increasing number and variety of problems get tossed into the organization's lap as apparently appropriate areas for group, rather than individual, concern. When such a toss is made, our way of facing it is to appoint another committee and add to the length of Board and Council agenda. During the last year, we have had 44 APA committees. The Board of Directors has spent six very full days in face-to-face labor on the Association's affairs and has conducted a great deal more business

by mail. The Council of Representatives received approximately three pounds of material from committee chairmen and the Central Office as background for its two-day meeting in Washington.

These small facts lead to some big questions. How intricate can APA get? How intricate *should* it get? How do we solve our problems other than by turning them over to committees and boards and councils? What is the proper relation between an organization and the problems, needs, aspirations, and preferences of its members? Is APA too centralized, too bureaucratic? Some members think so. Is APA too slow to face new problems, to take official action, to establish institutional controls over individual members, to promote psychology and protect psychologists? Some members think so—loudly. Is the APA really doing its job? It is impossible to say until we know what its job is. At the moment we really do not know its job well enough to establish criteria against which we can assess the APA's effectiveness as an organization. Perhaps the forthcoming Policy and Planning Board study will enable us to understand what is the real function of the APA and to guide ourselves, democratically and intelligently, toward the creation and maintenance of an organization maximally effective in its stated purpose of advancing psychology as a science, as a profession, and as a means of promoting human welfare.

Against this background of puzzlement, it may be well now to summarize some of the major trends, events, and accomplishments of the last year.

Let us turn first to publications. In many respects, the APA's primary function is that of a publisher. In 1951 we edited, printed, and distributed something over a half-million separate issues of our separate journals. This activity involved a staggering number of editorial man-hours, and a total outlay of \$233,000, or 77 per cent of our annual budget. Our publication business is close to the edge of financial and other trouble. We do not know the solution to all our publication problems but there is

reasonable ground for optimism that psychologists will solve them.

In the publications field, there are three unique accomplishments worth reporting. First, the newly-constituted Publications Board has taken a vigorous interest in all aspects of our publication affairs. Such an interest on the part of an involved and varied group of psychologists can and will be of great help in insuring that our publications continue to serve well the interests of scientific communication.

Secondly, the Council of Editors labored mightily and produced for psychologists a uniquely valuable document known as a Publication Manual. This Manual was distributed as a supplement to the July issue of the *Psychological Bulletin* to all members of the Association. For this accomplishment, psychologists owe a great deal to our editors and particularly Laurance Shaffer, who shepherded the project to completion.

A third unique event was the publication of a 294-page Morton Prince Memorial Supplement to the *Journal of Abnormal and Social Psychology*. The production of such a supplement was made possible by the fact that the journal has built up a financial surplus which, under the deed of gift from Morton Prince, must be spent only on that journal. The supplement represents a sizable editorial accomplishment. It had the function of reducing materially the publication lag for the *Journal of Abnormal and Social Psychology* and of helping with the lag for our journals in related fields.

In nonpublication activities the Association has had a long busy and perhaps a productive year. I would like to underscore some of these activities—the ones that seem to be both significant and unique.

We have adopted a code of ethics. All will agree that the Committee on Ethical Standards for Psychology has brought to intelligent completion a prodigious task. Most will agree that our adoption of an ethics code represents a major, delineable, and unique step toward psychology's maturity. We have said to ourselves and to the world that we accept as best we can the responsibilities that go with our position in society.

The Education and Training Board has completed its first year of activity. The very existence of this Board and its various committees represents and articulates, I think, psychology's willingness to accept responsibility for turning out the best-trained psychologists, whatever the specialty, we possibly

can. It seems to be true that the 1952 Education and Training Board organization has taken up where previous separate and exploratory committees have left off and has, in a properly nondirective way, made unique and broad-gauged progress.

Nineteen fifty-two also represents the year in which the APA became a property owner. By now, most members have heard about the APA building, many have seen it in its splendid state of nakedness and a few have already made a financial contribution to the completion of the venture. The APA veritably owns a building. We have not yet paid for it, but our equity is large and will grow. The building represents much-needed space for our Central Office people. For some time, we have been very seriously cramped and discommoded in our present quarters. The building also represents something much less mundane and more important than space for APA employees. It represents to many the stability of psychology—its belongingness, its acceptance in America, its parity with other scientific and professional fields.

Another major event in 1952—or something that seems likely to become an event—is the Policy and Planning Board study designed to delineate major trends in, and characteristics of, psychology as a science and as a social entity. A working outline of this study has been created and tentative arrangements made to initiate it. There seems a good chance that the study will be financed by the National Science Foundation. Outlining and arranging for this study has been a very demanding job for the Policy and Planning Board. And it has involved some genuine courage, for there are no real models for the kind of study the Policy and Planning Board people envision. The problem is one for which there are no comfortable conceptual handles. But even a little imagination about the destination is enough to set off vigorous efforts to get there—even when there is little to hold to and only sketchy views of the ground. There seems to be a good chance that by taking systematic thought of itself, psychology can contribute significantly to its own development as a science and as a profession.

An event that has become almost routinely unique in APA is the annual convention. This year's meetings are unique in magnitude of attendance, unique in the complexity of program, unique in the number of related groups participating, uniquely expensive, and uniquely wearing on the conscientious convention-goer. When Saturday noon comes, 397

papers will have been read, 80 symposia will have been held, 23 addresses will have been given, about 65 business meetings will have been conducted. Over 4,000 people registered for the convention. In every category, the 1952 figure is appreciably larger than that for 1951. The 1952 Program Issue of the *American Psychologist* is 26 pages longer than it has ever been before.

All this has happened in spite of fairly vigorous—if nondirective—efforts on the part of the Program Committee to keep the program within manageable limits.

The APA convention—with its tendency to grow larger and more intricate—has become a rather serious problem. The Board and Council have faced the necessity of doing something to control or revise or redesign our annual meetings (see report of Recording Secretary).

During the meetings a number of young men and women, wearing ushers' badges, circulated through the two headquarters hotels conducting interviews and counting people at various sessions. These were VA trainees who were helping with a study designed to find out a little something about what psychologists do at meetings and what they want a convention to be.

One specific thing we wanted to find out was the use our members make of the Program Issue of the *American Psychologist*. This issue has become so heavy a tome that it can be used as a blunt instrument for committing murder. It is, in fact, a murderous thing to edit and print. It is also very expensive. The 1952 Program Issue cost the Association close to \$10,000. Is it worth it? What use is made of it, and of the abstracts of papers? Are there alternative ways of achieving whatever ends are achieved by the issue? You can see the utility of answers to such questions. We may have some tentative answers in a few weeks.

Another unique development I wish to mention is this year's public information activity. At these meetings the APA engaged, for the first time, in a very active effort to meet the press half-way in covering the newsworthy events transpiring here. Last spring the Board of Directors instructed the Central Office to conduct an experiment in public relations—an experiment to determine the results achieved by preparing advance releases on newsworthy papers and events. As part of this experiment we secured the services of a professional sci-

ence writer and had him prepare releases on a number of papers. Through subscription to a clipping service we will be able to find out what happens to our release-covered news as compared to news the various reporters secure without the benefit of prepared releases. The experiment is in progress.

We have also tried an administrative experiment or two, as supplements to that ordered by the Board. We have taken various steps that we think will insure that these meetings will be more thoroughly reported in the press than any others in our history. Our attempts to facilitate this coverage are based on the beliefs (a) that psychology is news and *will* get into the papers in spite of anything we do or do not do, (b) that accurate and intelligent coverage of representative events is better than less intelligent coverage of only the obviously sensational events, and (c) that efforts to meet journalists half-way, to know them, to acquaint them with our problems and to help them do their jobs will result in coverage that is more accurate, more informed, and more representative.

Our contacts with journalists have been very pleasant. They are bright people. They are literate people. They are often down with a genuine concern for the human enterprise and demonstrate a sincere wish to educate people. Our efforts to help them accomplish their ends have felt good to us. (Incidentally at least three reporters who covered the meetings have undergraduate majors in psychology.)

As is usual with administrative experiments, we will get few hard data on the effects and effectiveness of this venture. But we will have some feedback and perhaps what little we get will help psychologists escape, in one direction or another, their present highly-charged ambivalence toward publicity. We will have to decide what we want in the way of public information programs and in what way we will join in the general fight against anti-intellectualism, a fight in which all sciences have an enormous stake.

SOME STATISTICAL FACTS ABOUT PSYCHOLOGISTS

I now wish to turn from a consideration of psychologists organized and focus for a while on psychologists as individual entities. Most APA members will remember receiving, in the spring of 1951, a fairly elaborate questionnaire promulgated jointly by the National Scientific Register and the APA

Central Office. The Register people sought data for their study of the nation's scientific manpower. The Central Office sought data to use primarily in the 1951 biographical directory. We sought it together, to avoid duplication. The directory has long since been completed, but the quantitative data from the whole survey are just now becoming available. From the outset we have conducted the APA part of the survey on a shoe-string budget, getting free IBM runs here and outside funds there to push the study ahead. Now we have a wide variety of raw facts about APA members. With the permission of Jane Hildreth and George Albee, the two who have had most to do with the whole project, I would like to present, in a once-over-lightly way, some of the general findings of the survey.

We mailed out copies of the combined questionnaire to the 8,600 psychologists who were members of APA in 1951. We received 6,743 returns. For purposes of research we thus had an 80 per cent sample. There is evidence that no systematic peculiarity determined who returned the completed questionnaire. The age, membership status, and divisional affiliation of those who returned are almost exactly the same as those who failed to return. We will be reasonably safe in assuming our sample to be representative.

In treating the results, the procedure here will be merely to hit the high-spots in several areas. Our data are now completely coded and punched on IBM cards so that we can test a very great variety of hypotheses about at least the superficial characteristics of psychologists. More detailed, more analytical treatments of the data will be made available later to those who are interested.

Psychologists Are Numerous

At the moment, APA has 10,000 members. At the beginning of 1953 we will have more than 11,000. And if we can extrapolate to the country at large from George Speer's study of psychologists in Illinois, there are perhaps 8,000 more people who are employed as psychologists, who use—and may—deserve—the psychological label.

The present APA membership makes an impressive comparison with the 31 in 1892, 393 in 1920, 5,000 in 1948, and 8,600 a year ago. We are still headed toward an extrapolated total of 60,000,000 psychologists a hundred years from now.

The present figure on the number of American

psychologists—maybe 18,000—also makes an impressive comparison with the number of psychologists in other countries. There are approximately 2,500 psychologists in Great Britain, 700 in Japan, and perhaps two dozen in South America.

How do we account for the proliferation of psychology in this country? One hypothesis is that American culture has a unique tolerance for people who probe into the secrets of inner life, who examine the gift horses of "common-sense" folkways about human beings, who question institutions, who rock many traditional boats and create many ambiguities. My own impression is that anything approximating enthusiastic support for psychology is factually unique to America. My own feeling is that the fact of such support is evidence of American intellectual and emotional resilience. But I am sure that if the social scientists would set themselves searching for the genotypes underlying this phenomenon, sounder, more analytical, and less complimentary interpretations would be articulated.

At any rate, psychologists are numerous. They are more numerous in some parts of the country than in others. If we extrapolate from our survey to a 1953 total of 11,000 APA members, we find approximately 2,300 members in the state of New York, 1,400 in California, 1,000 in Illinois, 800 in Pennsylvania, 750 in Ohio, 600 in Massachusetts, 500 in Michigan, and 300 in Minnesota. If we move away from urbanization and toward the South, we find 25 in South Carolina, 60 in Mississippi, 80 in Alabama, 200 in Kentucky, and 300 in Virginia. From such data we may eventually be able to formulate hypotheses about what sorts of social climates are particularly nurturant to psychologists.

Psychologists are Young

The age of APA members varies from 21 to 90. The median age of those in our sample is 37 and the mean is 40. Nearly one-quarter of our sample report ages of 30 to 34 years and two out of three members are under 40. These facts are consonant with those concerning our rapid growth—especially since World War II. Our median age is almost exactly the same as that for members of American Chemical Society and American Physical Society, reflecting the fact that all three fields have been growing rapidly in recent years. Today's figures on psychologists' ages would show us to be even younger than the 1951 figure indicates us to be, for since the

survey was made we have taken in 1,400 new members. Soon we will take in more than a thousand additional ones. A large proportion of these new members will be less than 30 and will decrease the mean age considerably.

We will not here belabor the facts about age. At a general level, it is clear that we need not worry for some years about any large proportion of our members becoming eligible for the Life Member's freedom from dues. At a specific level our data can answer detailed questions about where our young—or old—people are and what they do. I will cite only a few additional facts about age and then leave the topic. We looked through our results to find out what these younger psychologists are doing. The following table gives the percentages of people in various lines of psychological work who report ages below 30.

Employment	% Below 30 Years of Age
Students, full-time graduate	69.9
Students in practicum training	81.5
Academic research	55.0
Clinical, nonfederal clinics	46.7
Industrial, business consultants	30.3
Clinical, nonfederal hospitals	24.0
School systems	20.8
Clinical, private practice	17.7
Academic administration	10.5

Psychologists Are Well-Educated

There are more PhD degrees per unit of population in APA than in either the American Chemical Society or the American Physical Society. While 57 per cent of APA members have the PhD or an equivalent degree, the figure for chemists in ACS is 24 per cent and for physicists in APS is 45 per cent. Only 7 per cent of chemical engineers have the PhD degree. If the PhD degree signifies education then psychologists are relatively well-educated.

There are three implications of these facts that seem worth underscoring. First, though psychologists are inclined to worry about what level of training a person must have before he assumes the psychologist's title, it appears that people can come by the label "chemist" or "physicist" on the basis of relatively little training. Though all members of ACS may not be entitled, or welcome, to the title "chemist," 5 per cent of ACS members have had no college degree and 54 per cent hold only the BA degree.

Second, the relatively great percentage of chem-

ists and physicists without the PhD degree suggests that these two fields have developed in such a way that large numbers of technicians can be employed—and usefully so. Perhaps in another few decades, psychology will reach the stage where there are many research and service technicians, gainfully, usefully, and happily employed, while there are relatively few research scientists or independent practitioners in the field. Our present tendency is to select and train as if every person in the field is a potential candidate for the PhD degree. Perhaps we should soon reorient ourselves and begin creating billets and appropriate training for people who are technicians, and who are frankly labeled as such—people who can play, with dignity and security, the role of helper. Some thoughtful psychologists are now recommending just such a course of action.

A third implication from these facts is this: the APA is not, as some people put it, "infested" with MA psychologists. While 39 per cent of our members have the MA degree only, 39 per cent does not constitute a majority and if we eliminate graduate students from this 39 per cent it turns out that more than two out of three employed psychologists have the PhD degree. Those who have any anxiety about being "surrounded" by MA psychologists are hereby referred to the ACS, a fairly sound and flourishing organization, with 76 per cent of its members falling in the non-PhD class.

It is perhaps significant that of all our members without the PhD degree, 71 per cent say they plan to get it. Fifty-five per cent planned to have it by the end of 1952. While no one would want to guess how many of these aspirants will eventually secure the PhD, the existence of their plans is an interesting fact. The fact may testify merely to the ambition—or optimism—of MA psychologists. A more interesting possibility is that the fact means (a) that psychology's prestige system places an enormous premium on the PhD degree, and (b) that there are in existence relatively few satisfying, dignified, and secure careers for holders of the MA degree in psychology. The only real way up for the psychologist with a master's degree is to jump a relatively large gap and land with the doctorates. It seems to some that the hurdling of an academic gap in order to win a more real-life responsibility and income is somewhat peculiar. But with the present attitudes and present employment practices in psychology, it is very clear that there are many

people in the field who look longingly, if sometimes unrealistically, toward the PhD diploma. It may be well that psychology is, in the main, a field both numerically and psychologically a field for PhD's. It appears, however, that if we continue this development, psychology will be unique among those professions having both pure and applied segments. There is certainly nothing wrong with uniqueness per se and there may not be anything at all wrong with this particular uniqueness, but perhaps we should not *unconsciously* foster this development. A case can be made that the present and past APA committees studying subdoctoral problems have fixed upon a cardinal significant aspect of psychology's development.

We have good data on such things as the salaries, place of employment, specializations, and ages of both PhD and MA psychologists. We will not dig into these data here, but one general trend is worth pointing out. The data make it clear that the applied or service specialties—vocational, clinical, and industrial psychology—include large numbers of MA psychologists, while the more academic specialties do not. Teaching and research in academic settings are essentially PhD activities. Much less so are activities connected with service. For example, only 22 per cent of teachers of psychology are without the PhD, while nearly two-thirds of those employed in nonfederal hospitals and clinics, two-thirds of those in school systems, nearly half of those employed by business and industry, and over a third of those in private clinical practice have no degree beyond the master's. But it still seems to be true that psychology, both in subtle and in obvious ways, is strongly oriented toward the doctorate.

Psychologists Have a Wide Variety of Specialties

One has to be neither historian nor keen observer to know that clinical psychology has expanded enormously in the last ten years. Our 1951 data show that 36 per cent of APA members list their primary specialty as clinical psychology and another 4 per cent describe themselves as specializing in behavior deviations. It is a good guess that out of our 10,000 present members, 4,000 specialize in some form of clinical psychology. Everybody has known for a long time that there are a lot of clinical psychologists but the fact that there are so many still seems to surprise people.

The fact may even produce sputtering symptoms of apoplexy in those few members who continue to react viscerally to the term "clinician," who operate with a stereotyped picture of the clinical psychologist as a tweedy, mumbo-jumbo artist with a Rorschach card in one hand and a master's degree in the other.

Nevertheless, about 4,000 members of the Association report themselves as specializing in clinical psychology. Before anybody makes anything of this fact, however, it will be well to look for a minute behind the label. What are clinical psychologists really like? Of course, our survey data will give no satisfactory answer to such a question, but there are some facts that may help destroy any impression that clinical psychologists all fit the same pattern or are all different from any other kind of psychologist.

About 1,000 clinicians work in academic settings. Of the 3,000 nonacademic clinicians, a majority work in clinics or hospitals under federal or state sponsorship. About 175 work in nonacademic research and developmental programs. Two hundred or more work in schools. About 300 are in private practice.

The median salary for clinicians is less than that for psychologists in experimental, social, or physiological fields. Clinical psychologists are younger, on the average, than psychologists in any other specialty except experimental. Their median age is 36.3 years. The median age for experimentalists is 35.5. By comparison, the figure for educational psychologists is 43.1.

Forty-six per cent of the clinicians in our sample have the PhD degree. For other specialties this figure varies from 33 per cent for vocational psychologists to 77 per cent for physiological and 78 per cent for experimental psychologists. About 70 per cent of the clinicians without the PhD degree say they plan to get it. Fifteen per cent, as compared with 9 per cent of the vocational and 29 per cent of the experimental psychologists, are APA Fellows.

A relatively large number of clinicians are women. Whereas 8 per cent of industrial psychologists, 13 per cent of experimental psychologists, and 27 per cent of educational psychologists report themselves to be women, the figure for clinical psychologists is 35 per cent. The only specialty achieving a higher index of femininity is developmental psychology.

There the figure is 60 per cent women and 40 per cent men.

Where 23 per cent of the experimentalists and 31 per cent of the developmental psychologists have held either divisional or APA offices, only 9 per cent of the clinical psychologists have held such offices. In spite of there being about five clinical psychologists to every experimentalist, the experimentalists in our sample had held 79 APA offices while the clinical people had held 78. No one can rightfully say that the APA is being dominated by the clinical psychologists. Neither can they say, of course, that the experimentalists run things. Maybe it is the *developmental* psychologists who run the APA. As a matter of fact, our data indicate developmental psychologists to be quite a unique group. Compared to people in any other specialty, they have held more offices, they seem more worried about APA problems, they volunteer more frequently for APA committees, they more frequently belong to the appropriate APA division. They also include more women—which may help explain some of this uniqueness.

But back to the clinical people. Our present data do not say much about the competencies or the sub-specialties of these psychologists. A quick glance, however, at the array of second and third specialties checked by clinicians indicates considerable versatility or transferability. How this compares with the versatility of people in other specialties we do not yet know, but it seems pretty clear, at the level of impression, that clinical psychologists are *psychologists* with a specialty in clinical. This is, of course, more true of PhD clinical people than of those with the master's degree, but there is a suggestion that if all jobs in clinical psychology suddenly evaporated, a vast majority of PhD clinical psychologists could with some ease transfer to work in nonclinical fields. If this is so, clinical psychologists are not extremely different from other kinds of psychologists. When we analyze our data more completely, we will be able to make clearer statements about the characteristics of our clinical members and about the extent and nature of the differences among people in the several specialties.

People who report the clinical specialty are the largest single group in the APA, but it cannot be said that they dominate the APA either socially, politically, or even numerically. The following table presents estimates of the number of our present members in each of the various specialties.

Specialty	% of Sample	Estimated Number of Present Membership
Clinical and behavior deviations ...	40.5	4,050
Educational	13.3	1,330
Experimental	7.5	750
Industrial	7.3	730
Vocational	5.5	550
Social	4.9	490
General (History, Systems, Theory) ..	4.1	410
Developmental	3.5	350
Personality	2.9	290
Physiological	2.5	250
Other and unspecified	7.6	760

Detailed data on people in each of these categories will eventually be available. These facts will not only help clear up our thinking about those attributes of people that lie behind the various labels but will be useful in dealing with problems of supply and demand, and of selection and training. They will help us perhaps keep track of trends in our field.

Psychologists Work in a Variety of Places

Psychology, as everyone knows, is no longer a purely academic discipline. Psychologists now work in many and varied settings, doing a wide assortment of things with, for, and maybe to a wide variety of people. The following table gives over-all estimates, based on an extrapolation from our sample to the total present membership of APA, of the number of APA members working in various settings.

Academic positions, total	4,380
Teaching primary	2,630
Research primary	380
Service primary	380
Administration primary	990
Clinical positions, total	2,120
Federal agencies	580
Nonfederal agencies	1,270
Group practice	60
Individual practice	310
Nonacademic administration, research, and development, total	900
Military administration, research and development	380
Other federal agencies (Public Health Service, etc.)	180
Nonfederal agencies	340
Industrial psychologists, total	510
For business and industrial concerns	300
Consulting	210
Students and Others	1,700

The existing societal acceptance of psychology as a useful discipline is reflected in the fact that only

44 per cent of our 1951 sample held academic jobs. (Dael Wolfe reported in 1948 that this percentage was 48 per cent at that time.) Approximately a fourth of our present academicians have supplementary employment off the campus—in private clinical practice, in governmental agencies, or in industry. Of the approximately 1,700 people in our sample whose primary job is academic teaching, for example, one out of twelve engages in some form of clinical practice on the side. It is not only true that academic psychologists are becoming relatively fewer, but also true that those who work in academic settings often get their hands into "useful" activities.

A reciprocal sort of arrangement works, however, to lessen the apparent trend away from the academic. Large numbers of psychologists employed in nonacademic positions return to the campus to do part-time teaching. For example, one out of six of the clinical psychologists in our sample employed by the Veterans Administration reports supplementary academic teaching. Clinicians in other kinds of institutional jobs do the same thing with approximately the same frequency. Clinicians in private practice and industrial psychologists also teach but less frequently. Psychologists holding research or administrative jobs in the military or other branches of the government occasionally have supplementary teaching positions. These facts say that there is fairly close contact between academic and nonacademic psychology, even though the trend is toward the clinic, the hospital, the military post, and the market-place. Approximately 1,000 academic psychologists go back to the classroom to teach, personally bridging in the other direction the alleged gap between academic and applied psychology. We do have considerable intercourse between the classroom and laboratory on one hand and the practical problems of life on the other—the kind of intercourse J. McV. Hunt, in his presidential address, finds productive. It is hard to say, of course, whether the contact is of optimal kind and amount.

To those who worry about psychologists drifting farther away from a concentration on research, further facts about academic employment among our members will give little comfort. If we make the reasonably safe extrapolation from our sample to the total membership of the Association, we get a total of 4,380 psychologists holding jobs in academic settings. Of these, 990 are primarily occupied with administration. Three hundred and eighty work primarily in service jobs such as counseling, guid-

ance, and personnel. Two thousand six hundred and thirty are primarily teachers. There are only 380 psychologists whose first focus is on research. While we do not know how this figure might compare with those for chemistry or physics, and while we do know that significant amounts of significant research are carried on in spite of heavy teaching loads and/or administrative burdens, it is quite clear that even in our colleges and universities, psychologists in general do not spend a very large proportion of their time and energy on research activities. It may be true that the 850 or 900 psychologists holding government jobs in research and development are currently producing more science than are our 4,000 or more academic people. The study to be conducted by the Policy and Planning Board may throw some light on this question.

We said above that there has been a relative decline in the number of academic psychologists and that some members may wish to worry about it. The same members, however, might reduce their worries by taking a different and perhaps equally defensible view of the facts. Though the percentage of psychologists employed academically has been gradually decreasing, the percentage of academic faculty members who are psychologists has been increasing very rapidly. In absolute terms, the number of psychologists employed by colleges and universities has almost doubled since 1948.

The facts, however they are perceived, show that the majority of psychologists live and move in non-academic orbits. The facts do not show, however, that psychology has really gone nonacademic. Psychology maintains what seems to be, relative to other fields, very close contact with its academic home. A very large group of psychologists, of course, stay at home. A number of others come back home for brief spells. A larger number may be homesick, but our survey yielded no data on that point. One gets the general impression that our own prestige system still puts the scholar, teacher, and creative research man on a high pedestal. Occasionally there are deliberate efforts to educate the academician, to shorten his hair, to bring him out into the real world. But a deep respect for the academician, for the pure and grumpy scholar, remains. Occasionally, feeling threatened by the expansion of applied psychology and maybe a little envious of the allegedly high salaries the nonacademic people pull down, the university psychologist laments the secularization of his science, belittles the efforts of psy-

chologists to be useful, and hones for the good old days. With some frequency, however, nostalgic lament gives way to a curiosity about the applied aspects of the science and the pure, uninvolved, grumpy, and lonesome scientist finds himself with an after-hours client or a summer job in a military agency.

While nobody can predict whether the marriage between the pure and the applied aspects of psychology will last forever, and nobody knows for sure whether such a match will be a productive one, the marriage now clearly exists. In spite of evidence of marital uneasiness, the number of people who alternate between town and gown may be a sign that psychology will continue to be characterized by some sort of unity among diversity.

Psychologists Are Well-Paid

The median 1951 total income reported by psychologists with the PhD degree was \$6,400. The median salary for MA was \$1,830 less—\$4,570. For the 6,708 members of the Association answering the question about salaries, the median annual income was \$5,580. These figures may not impress those who have done all their earning since World War II and have come by realistic attitudes toward the present functional significance of a dollar, but to psychologists who still carry vestigial remnants of financial attitudes and habits formed in the thirties, the figures are likely to seem at least mildly fabulous. And they will seem more so if we multiply \$5,580 by our 10,000 members to secure an annual total of \$55,800,000 paid to members of the Association. To anyone who is familiar with Biblical recommendations and also concerned with APA finances, this sum immediately suggests a way to pay for our new building and double the size of all of our journals. All we have to do is to get our members to tithe.

The 1951 median income for PhD's in chemistry was \$6,900 as compared with the psychologists' \$6,400, while PhD physicists earned \$7,100. PhD's in chemical engineering had a median income of \$7,900, thereby demonstrating, perhaps, the economic advantage of being useful. MA's in chemistry and physics earned around \$700 per year more than did MA's in psychology. MA's in chemical engineering again did a little better. I guess we can say that psychologists are well-paid. But certainly not startlingly so, when we compare ourselves with physicists and chemists. Nor is there any picture of

opulence when we compare our 1951 incomes with our 1948 incomes. Dael Wolfe reported psychologists' median 1948 income, from all sources, to be \$6,150 for those with the doctorate and \$4,050 for those without it. So PhD psychologists have been keeping up with inflation at the rate of about \$100 a year while MA psychologists were doing a little better.

Within psychology, annual income varies from specialty to specialty. Industrial psychologists lead the league with a median income of \$7,440. Those reporting no specialty have the lowest median—\$4,780. Also low are general theoretical psychologists, with \$5,190 and clinical psychologists with \$5,220. Those in social, physiological, educational, and experimental psychology join with the industrial people in constituting the best-paid specialties. We cannot tell from these data, of course, which really

TABLE 1
Median salaries by field of employment in psychology

Place of Employment	N in Sample	Reported 1951 Professional Income
Academic teaching, psychology	1,438	\$5,330
Academic teaching, other fields	71	6,360
Academic service	208	4,850
Academic research	198	5,370
Academic administration	564	6,860
Clinical, VA, neuropsychiatric installations	233	5,990
Clinical, VA, other than NP	63	6,210
Clinical, other federal agencies	53	5,750
Clinical, nonfederal hospitals	317	4,460
Clinical, nonfederal clinics	239	4,660
Clinical, other nonfederal agencies	176	4,570
Clinical, group practice	25	6,500
Clinical, individual practice	99	6,830
School systems, public	345	5,290
School systems, private	35	4,700
Administration, research and development		
Army	68	6,610
Navy	61	6,340
Air Force	111	6,250
Nonmilitary federal agencies	112	7,390
Nonfederal agencies	65	6,210
Private organizations	120	6,500
Industrial		
Employed by business or industry	177	7,630
Members of firms or consultants	78	8,330
Private consultants	11	9,000
Students, full time	48	Less than \$3,000
Students, assistants	125	Less than \$3,000
Students, practicum training	117	3,420

TABLE 2

Median salaries by field of specialization in psychology

Reported Field of Specialization	N in Sample	Reported Median Professional Income, 1951*
General psychology (no reported specialty)	52	\$4,780
Behavior deviations	234	5,340
Clinical	1,879	5,220
Developmental	182	5,610
Educational	761	5,760
Experimental	423	5,720
General (History, Theoretical)	220	5,190
Industrial	416	7,440
Personality	152	5,440
Physiological	133	5,800
Social	277	5,990
Vocational	313	5,430
Other	232	6,400

* These figures are based on the total sample. If students, the retired, and the unemployed were excluded, this figure would be somewhat different.

are the best-paid specialties since we have not held constant the variables of age, experience, degree, and place of employment. The figures do confirm the general impression that industrial psychologists tend to have good incomes, but there is clearly no substance in the commonly encountered notion that all clinical psychologists are financially fat while all other kinds of psychologists are overworked and underpaid.

Psychologists' salaries vary more with place of employment than with specialization. Psychologists employed by or serving as consultants to business and industry draw down the highest salaries. Private consultants to industrial concerns have a median annual income of \$9,000. The median for members of private organizations which consult with industry is \$8,300. For those who are employed directly by business or industry, the figure is \$7,630. The lowest medians are for those who work in nonfederal hospitals (\$4,460) and nonfederal clinics (\$4,660). Psychologists working in private schools do a little better, with a median of \$4,700, while those in public schools, while still below the general median, do better than the private school people, with a median of \$5,290.

Academic psychologists primarily in teaching have a median income of \$5,530. For those primarily in academic research the figure is \$5,370. Both

figures are close to the median for our total sample. Academic administrators go considerably higher with a median of \$6,860.

For several years people have had the firm impression that psychologists could improve their financial position considerably by moving from the university into governmental billets. The impression has been, and still is, sound. From the 1951 medians, it seems clear that the academic teacher can increase his gross professional income by approximately \$900 if he moves into a job with one of the military agencies. The academic research man can do even better. His median in academic life is \$5,370; in the Army, research and development people have a median of \$6,610—a difference of \$1,240. If we take our medians at their face value, he could add over \$2,000 to his annual income by taking a job in a nonmilitary federal agency.

We must not put complete credence in our figures as they presently fall, however, for in comparing places of employment, we again have not held constant such important things as degree and years of experience.

Among our large group of nonacademic clinical psychologists, the best-paid group are those in individual practice. Their median is \$6,830—very close to that for academic administrators and a thousand dollars or more higher than that for teachers or researchers. Those in group practice do almost as well with \$6,500. The medians for clinical people in federal agencies (these are principally VA agencies) range from \$5,750 to \$6,210. We have already seen that those in nonfederal hospitals and clinics make \$1,100 to \$1,500 less. A probable factor here, of course, is the large number of MA psychologists in the latter agencies.

A final fact on salaries. The median salary for men is \$5,970 while that for women is \$1,460 less. In 1948, according to Dael Wolfe's report, the man-woman differential was \$1,900. So women are doing financially better. But in spite of the fact that many psychologists regard the sex of another psychologist as a nonfunctional attribute—in some contexts, at least—and in spite of relative gains by women, it is still worth \$1,460 a year to be a man. Again there must be a caveat, however, for it is a fact that income varies with degree and a further fact that while only 42 per cent of our 2,700 women members have the PhD, 60 per cent of our male members have it. This difference in frequency of

the doctorate may do much to reduce the male-female salary differential.

SUMMARY

Though there seems to be no neat way to summarize this report, there are some declarative sentences available, which, if given a terminal flavor, may help create some feeling of closure.

The APA is growing and is increasing in complexity. Psychology continues to develop—both on and off the campus. Psychologists are adjusting. There is no longer any need to build a national organization. We have one—a going, vigorous one. There is no longer an urgent need to win support and approval for psychology. Psychology is now widely accepted. There is no longer real occasion for the individual psychologist to feel self-conscious and defensive in any company. Psychology has arrived. Our acceptance among the sciences and the professions is not everywhere complete and not all segments of the population are willing to grant that the psychologist is worth his salt—either in the laboratory, classroom, clinic, or in fields of diurnal action. But we are now in a stage of development where it seems appropriate to devote less energy to achieving responsibility and more to the job of committing it. What to do with our new-found belongingness? Where do we go from here?

It seems to me that many psychologists, though they would feel spiritually nude if found with their

values showing, have a deep and intelligent concern for human welfare, a concern leading them to skepticism about knowledge for its own sweet savor and to enthusiasm for the ideal of knowledge as a servant of man, a concern leading them to support that which is human and to scorn that which is merely successful. I think that many psychologists, though diffident about their own confusions, have both the ability and the temperament to stand the confusion and ambiguity consequent to the intelligent facing of problems of responsibility, right, wrong, good, bad. I think psychologists are sufficiently free from rigidity to adopt, when the occasion arises, new modes of behaving, new ways of adjusting—even in the face of prevailing pressures to conform to the old and the tried. I think that our recent actions are evidence of the sort of concerns, values, and abilities that are found widely among APA members. And as long as these concerns, values, and abilities are there, there is a chance and the likelihood that psychology, neither as science nor as service will develop in blind emulation of other sciences or other professions, or will follow models that lead us into consequences insulting to our individuality. I do not think we will adjust too perfectly to an imperfect world. There is a chance and a likelihood that we will find, through intelligent confusion and steady effort, a way that is *our* own best way of relating to the world. I hope the APA as an organization can continue to be an adequate instrument of its members' efforts in this direction.

Psychological Notes and News

Mabel R. Fernald, for 26 years director of psychological services of the Cincinnati Public Schools, died on October 9, 1952 at the age of 69.

Sarah S. Spivak was killed on January 22, 1952, when she was struck by a taxi in New York City. Mrs. Spivak was doing graduate work at Teachers College, Columbia University.

Ann Magaret has accepted an appointment as professor of psychology in the department of psychiatry at the University of Illinois College of Medicine in Chicago, effective September 1. As a member of the division of psychology of the department, she will participate in the training program for doctoral and postdoctoral fellows in psychology at the Neuropsychiatric Institute, and in the teaching of courses in the department of psychiatry. Much of her time will be devoted to research on problems of behavior disorder in childhood; she will continue her collaboration in a research project, conducted jointly by the departments of psychiatry and pediatrics, on psychosomatic illnesses in young children. She comes to Illinois from the University of Wisconsin, where she has been on the staff of the psychology department since 1945.

Clarence H. Graham, Columbia University, has been appointed psychologist attached to the London Office of the Office of Naval Research. He will be in London for a period of 11 months commencing in October, 1952. During the past summer he was professor of psychology in the Kyoto Seminars in American Studies at the University of Kyoto, Kyoto, Japan. The latter seminars were conducted under the sponsorship of the University of Kyoto, Doshisha University, the University of Illinois, and the Rockefeller Foundation.

At Emory University K. L. Chow of the Yerkes Laboratories of Primate Biology is serving as visiting professor in the department of psychology for the fall term. Karl Zener and Eliot Rodnick of Duke University will be visiting professors for the winter term and Garth J. Thomas of the University of Chicago will serve in a similar capacity in the spring term. O. H. Mowrer of the University

of Illinois will serve as visiting scholar in February, 1953.

At the Psychopathic Hospital, State University of Iowa, Irwin J. Knopf has been appointed assistant professor of clinical psychology in psychiatry and senior psychologist. Dr. Knopf came to the Psychopathic Hospital from Northwestern University. Woodrow W. Morris has been promoted from assistant professor to associate professor of clinical psychology in psychiatry and John R. Knott has been promoted from associate professor to professor of clinical psychology in psychiatry. Dr. Knott is chairman of the division of psychology in the Psychopathic Hospital and Dr. Morris is co-chairman. Victor Milstein and Betty Murfett are serving as interns in clinical psychology in the division of psychology of the Psychopathic Hospital for the year 1952-1953.

Howard B. Lyman has been appointed assistant professor of psychology at the University of Cincinnati College of Liberal Arts. He has been a research psychologist in tests and measurements at the U. S. Naval Examining Center at Norfolk, Virginia, and later at Great Lakes, Illinois.

Newly appointed members of the psychology staff at Brooklyn College include the following: Helen Joan Anderson, Mary Barker, Daniel E. Berlyne, Raef K. Haddad, Robert A. Harris, Eleanor M. G. Holzman, Ivan D. London, and Harold Proshansky.

Carmen Miller is now the clinical psychologist at Southwestern Medical School of the University of Texas, as of May 1, 1952.

The department of psychology at Ohio University has announced several changes in its staff. A. C. Anderson, who has been chairman for several years, has returned to full-time teaching. James R. Patrick has been named to succeed him. Maxwell S. Pullen has been appointed assistant professor and Duane F. Blackwood has been appointed at the rank of instructor.

DWane R. Collins has received a year's leave of absence from the University of Connecticut for the current year. He will assist in the development

of a student personnel program for the Instituto Tecnico de Aeronautica, Sao Jose dos Campos, Sao Paulo, Brazil.

Rohrer, Hibler & Replogle announce the following appointments to their staff effective September 1, 1952: **Charles A. Boswell**, formerly of Augustana College, Rock Island, Illinois, and **Avery L. Stephens** of the University of Omaha, will be located in the Chicago Regional Office. **Willis H. McCann**, formerly on the staff of the State Hospital, St. Joseph, Missouri, joins the Milwaukee Regional Office. **Edwin J. M. Sanford** comes from the University of Denver to be a member of the Los Angeles Regional Office.

Denis Baron, formerly associate professor of psychology, Oregon College of Education, is now associate professor and director of the Child Study Center, State University of New York College for Teachers at Buffalo, New York.

The psychology department at the University of Buffalo has announced the following additions to its staff: **Ira S. Cohen**, assistant professor; **Edwin C. Lawson**, instructor.

Samuel Kutash has been appointed chief psychologist of the new Veterans Administration Hospital, East Orange, New Jersey. **S. Simkin** replaces Dr. Kutash as chief psychologist of the VA Regional Office Mental Hygiene Clinic, Newark, New Jersey.

Oliver J. B. Kerner is now assistant professor of human development and psychology in the department of psychiatry at the University of North Carolina.

Dorothy Sall, formerly clinical psychologist at the Psychosomatic Clinic of Children's Hospital, Buffalo, New York, is now instructor and assistant director of the Child Study Center, State University of New York College for Teachers, also in Buffalo.

At their annual Award Dinner the Washington Chapter of the American Marketing Association gave **James A. Bayton** one of its awards for a "significant contribution to the field of marketing by Federal Government personnel in 1951." This award was for his work as head (part time) of the Consumer Preference Research Section, Bureau of Agricultural Economics. The specific project was

a series of studies that were of value to the apple industry of the Pacific Northwest. Co-winner of the award was **Shelby Robert, Jr.**, also of the Bureau of Agricultural Economics.

Robert V. Heckel, formerly assistant professor at Furman University, is now the clinical psychologist at the Greenville Mental Hygiene Clinic. He is also director of the Psychological Supply Company, which specializes in clinical toys and equipment, located in Greenville, South Carolina.

Louis C. Weber has resigned as chief of psychological services at Wichita Falls State Hospital to accept an assistantship in the College of Education, University of Illinois.

Hal Streitfeld has resigned as staff psychologist at the Mental Health Centers in Chicago to accept a position as staff psychologist at Topeka State Hospital beginning October 1, 1952.

Seymour Page has been appointed clinical psychologist in the division of pediatric psychiatry at the Jewish Hospital of Brooklyn on August 14, 1952.

David H. Fils has accepted a position as coordinating psychologist in the research and guidance division of the Los Angeles County Superintendent of Schools Office as of October 1, 1952. He was previously district psychologist for the Torrance, California, Unified School System.

Katharine E. McBride, president of Bryn Mawr College, is the new chairman of the board of trustees of the Educational Testing Service. **Frank H. Bowles**, **Lewis W. Jones**, and **George D. Stoddard** have been named new trustees of ETS.

Two recent appointments at the University of Pittsburgh are **Robert A. Patton**, as professor and chairman of the department of psychology, and **Jack Matthews**, as director of the division of psychological services. **Carroll A. Whitmer**, who has been acting chairman of the department and head of the division of psychological services, has accepted the position of chief psychologist at the VA hospital in Salt Lake City.

Robert S. Waldrop, formerly dean of students at Vanderbilt University, was appointed chief of the new vocational counseling program in the Department of Medicine and Surgery of the Veterans Administration, effective July 1, 1952.

Martin I. Kurke has been appointed to the research and development staff of the Bell Aircraft Corporation, Niagara Falls, New York. In the capacity of dynamics engineering-psychologist, he is now doing research on certain human engineering aspects of guided missile control.

Jerome H. Nagel, formerly a vocational rehabilitation counselor in the Minnesota State Department of Education, is now a staff psychologist at the Personnel Institute in New York City.

The Hogg Foundation fellowships for internships in counseling in the Testing and Guidance Bureau of the University of Texas have been awarded this year to Josephine Morse and Warren C. Bonney.

The advisory committee for the project on the development and status of research and education in psychology has now been constituted. Its members are **Clarence Graham**, **Lyle Lanier**, **Robert MacLeod**, **Eliot Rodnick**, **M. Brewster Smith**, **Robert Thorndike**, and **Dael Wolfe**, chairman. The project, which is being undertaken by the APA with the support of the National Science Foundation, is described in the Annual Report of the Policy and Planning Board in the October, 1952 *American Psychologist*.

A new **Evaluation and Advisory Service** for school and college test users has been announced by Educational Testing Service. **Paul Diederich**, a member of the ETS Research Staff, will be director of the new unit. Assistant director of the new unit will be **Anna Dragositz**, formerly head of the advisory service of the Cooperative Test Division of ETS.

The **Human Relations Advisement Group** was formed in February, 1952, with main offices in Amherst, Massachusetts. The Group offers psychological consultation and research services to social, industrial and educational organizations in the New England area. HumRAG is also available for contract research work with local, state, and federal government agencies. Associate directors of HumRAG are: **William F. Field**, director, guidance and counseling service, University of Massachusetts; **Aaron J. Spector**, department of psychology, University of Massachusetts; **Theodore R. Vallance**,

director, officer personnel research project, Newport, Rhode Island.

The **Officer Personnel Research Project** has been established at the U. S. Naval School, Officer Candidate, Newport, Rhode Island, under an American Institute for Research contract with the Office of Naval Research. The unit is a forerunner of a larger permanent research facility working in areas related to naval officer selection, training, and evaluation under the cognizance of the Research Division of the Bureau of Naval Personnel. The project director is **T. R. Vallance**, formerly assistant professor of psychology at the University of Massachusetts. Research psychologists are **Albert S. Glickman**, formerly assistant professor of psychology at the Georgia Institute of Technology, and **George J. Suci**, formerly of the University of Illinois.

An **Institute of Social Studies** has opened in The Hague, Netherlands. The Institute was started through the combined efforts of all the universities of the Netherlands. Its governing body is composed of representatives of these universities and its teaching staff is largely recruited from them, supplemented by visiting professors from other countries. Though subsidized by the Government, the Institute is an independent organization. The general object of this Institute is the advancement of knowledge in the social sciences with special emphasis on their comparative and international aspects. The activities of the Institute fall into two categories: (a) the training of men and women from the so-called underdeveloped countries; (b) the equipment of technical experts with knowledge they need in order to perform successfully their task in countries to which they are assigned. Courses will be given in English and will range from two years to six months. Students are expected to have had previous training in at least one of the branches of social studies, economics, law, or related subjects.

The recently dedicated **International Christian University** in Japan is urgently in need of books for its library. Psychologists who wish to contribute books or journals should write to **Mr. Stanley I. Stuber**, Executive Secretary, Japan International Christian University Foundation, 44 East 23 Street, New York 10, N. Y.

At the sixth annual meeting of the **American Catholic Psychological Association** held in conjunction with the convention of the APA, the following were elected to office: Rev. Charles A. Curran, Columbus, Ohio, president-elect; Rev. William C. Bier S. J., Fordham University, executive-secretary; Brother R. Philip, Toronto, and William A. Kelly, Fordham University (re-elected), members of board of directors.

The dates for the meeting of the **Committee for the Scientific Study of Religion** in New York City have been changed from December 26-27 to December 28-29. Details can be obtained through Professor J. Paul Williams, Mount Holyoke College, South Hadley, Massachusetts.

Plans are now under way for the **1953 Post-Doctoral Institutes** to be held during the week preceding the APA convention in East Lansing under Division 12 sponsorship. The aim of the Institutes is to improve the quality of psychological work in the clinical and counseling fields. Since the planning committee feels that the fulfillment of this aim would be greatly facilitated by suggestions and comments from psychologists in general, it is eager to hear from all interested parties. Recommendations regarding the conduct of the Institutes, topics to be studied, and instructors to lead Institute groups will be welcomed. Those concerned, regardless of divisional affiliations, should write by January 10, 1953, to Dr. Goldie Ruth Kaback, School of Education, City College of New York, New York 31, New York.

A conference of social psychologists was held at Unesco House, Paris, August 19-22, 1952, under the auspices of the Department of the Social Sciences of Unesco. Each of the constituent societies of the International Union of Scientific Psychology was asked to send a delegate. The following psychologists attended the meeting: Herbert C. J. Duyker, professor of psychology, University of Amsterdam; J. C. Flugel, special lecturer in psychology, University College, London; T. Husen, assistant professor of educational psychology, University of Stockholm; G. Kafka, professor of psychology, University of Würzburg; Otto Klineberg (chairman), Columbia University; P. Mentzsen, The Institute of Psychology, University of Oslo; Hivoshi Minami, assistant professor, Hitotsubashi University, Tokyo, director, Institute for Social

Research; Philippe Muller, professor of psychology, University of Neuchatel, vice-president of the Société Suisse de Psychologie; Joseph Nuttin, professor of psychology, University of Louvain, representative of the Société Belge de Psychologie; M. Ponzo, professor of psychology, Rome; Jean Stoetzel, professor of social sciences, University of Bordeaux; E. Tranekjoer-Rasmussen, professor of psychology, Psychological Laboratory, University of Copenhagen. H. S. Langfeld, secretary-general of the International Union of Scientific Psychology, and K. Szczerba-Likiernik, Unesco Secretariat, were present *ex officio*. Jose Germain, head of the department of experimental psychology and president of the Sociedad Espanola de Psicologia, Madrid, and O. A. Oeser, professor of psychology at the University of Melbourne and member executive of the Social Science Research Council, Australia, were there as observers.

The purpose of the conference was to discuss how social psychologists could further the aims of the Department of the Social Sciences of Unesco. The discussion centered around publications, exchange of persons and literature, problems for research, and possible contributions of social psychology to the 14th International Congress of Psychology which would fall within the interests of and could be supported by Unesco.

The first edition of the **International Catalogue of Mental Health Films** has recently been published. Copies are available from the Secretariat of the World Federation for Mental Health, 19 Manchester Street, London, W.1, at a price of \$4.00.

The November *Psychological Bulletin* is not being mailed in a wrapper, as usual, but with an address label pasted to the back cover. The APA office is experimenting with this form of mailing in an attempt to reduce costs. The office would like to hear from any subscribers who receive torn copies in order (a) to be able to replace these copies and (b) to have a check on the feasibility of mailing the journal in this way.

The University of Chicago will offer three \$4,000 postdoctoral fellowships in statistics for 1953-54. The purpose of these fellowships, which are open to holders of the doctor's degree or its equivalent in research accomplishment, is to acquaint es-

tablished research workers in the biological, physical, and social sciences with the crucial role of modern statistical analysis in the planning of experiments and other investigative programs, and in the analysis of empirical data. The development of the field of statistics has been so rapid that most current research falls far short of attainable standards, and these fellowships (which represent the third year of a five-year program supported by the Rockefeller Foundation) are intended to help reduce the lag by giving statistical training to scientists whose primary interests are in substantive fields rather than in statistics itself. The closing date for applications is February 1, 1953; instructions for applying may be obtained from the Committee on Statistics, University of Chicago, Chicago 37.

The American Association of University Women is offering twenty-five fellowships to American women for study or research during the academic year 1953-54. Awards range from \$1,500 to \$3,000. Applications must be submitted by December 15, 1952. For detailed information and instructions for applying, address the Secretary, Committee on Fellowship Awards, American Association of University Women, 1634 Eye Street N. W., Washington 6, D. C.

The American Philosophical Society makes grants for expenses to individuals engaged in research in the physical sciences, the biological sciences, the social sciences, and the humanities. The committee on research meets five times a year, in October, December, February, April, and June. An application may be made at any time and is considered at the next meeting of the committee if received a month in advance. Information and application forms may be obtained from the Executive Office of the Society, 104 South Fifth Street, Philadelphia 6, Pennsylvania.

ABEPP ANNOUNCEMENTS

Increase in fees. The American Board of Examiners in Professional Psychology announces, effective September 7, 1952, an increase in fees for the processing of candidacies. The application fee will be fifty dollars. The examination fee also will be fifty dollars. There will be no additional fee for the award of the diploma. The fee for re-examination on the written examination will be twenty-five

dollars, and the fee for re-examination on the oral part will be fifty dollars.

These actions were taken by the Board of Trustees in order to meet, in part, the greatly increased costs of the current activities of the Board. During the past five years of the Board's operation, nearly all of the candidates have been considered under the "grandfather" clause without examination. This phase of the work of the Board is almost completed. For all current and future applicants, both written and oral examinations are a mandatory part of the Board's procedure for the evaluation of candidacies and the award of the diploma. The effect of this change is to increase more than threefold the average cost of processing each application. The Board would have to suspend operations in mid-1953 if it did not increase income.

In addition to several steps taken recently to reduce the expense of Board activities, the Board of Trustees has thoroughly re-examined its operations with a view to making all possible economies. The chief operational expenses are those involved in (a) the secretarial work of assembling the materials of each application, (b) preparing and conducting the written and oral examinations, and (c) convening the Board for periods sufficient to permit thorough and judicial consideration of candidacies. The members of the Board and the special examiners give their services without remuneration.

The increase in fees, together with all possible economies, will not meet all the necessary costs of the Board during the coming years, and possible additional sources of support are now being actively explored.

Recent examinations. The American Board of Examiners in Professional Psychology recently completed the administration of its oral examination to twenty-three candidates who previously had qualified on the Board's written examinations. This oral examination was held in Washington, D. C., at the time of meetings of the American Psychological Association.

The oral examination consists of the following four parts:

1. Diagnosis and/or evaluation. (The definition of the professional problem.)
2. Therapy and/or recommendations. (How to solve the professional problem.)
3. Skill in the interpretation and use of research findings. (What valid knowledge exists about the problem.)

4. Organization and administrative problems of professional psychology. (What are the conditions of professional practice.)

Previous to Part 1 of the examination, the candidate spends approximately two hours in a professional field situation, which is, as near as possible, typical of his usual professional work experience. All of the above candidates had completed the professional field situation and Part 1 of the oral examination at regional centers during the Spring and Summer of 1952.

Each examination is conducted by an examining team of three diplomates, one of whom is a member of the Board and who serves as chairman.

At the conclusion of the examination, the Board met and reviewed the individual reports from the oral examiners and the entire file of information on each candidate in order to arrive at its final decision.

As a result of these examinations and review procedures, the American Board of Examiners in Professional Psychology is pleased to announce the award of its diploma to the following thirteen candidates who have satisfactorily completed both written and oral examinations, in addition to all other requirements of training, experience, and endorsements:

Albert Ellis	Clinical Psychology
Herman Feifel	Clinical Psychology
Sol Louis Garfield	Clinical Psychology
Clayton d'Armond Gerken	Counseling and Guidance
Edward M. Glaser	Industrial Psychology
Robert R. Holt	Clinical Psychology
Ivan N. Mensh	Clinical Psychology
Ralph D. Norman	Clinical Psychology
Roy Schafer	Clinical Psychology
Howard L. Siple	Clinical Psychology
Robert L. Thorndike	Industrial Psychology
Pauline G. Vorhaus	Clinical Psychology
Philip Worchel	Clinical Psychology

In addition to the above awards made on the basis of successful completion of written and oral examinations, the American Board of Examiners

in Professional Psychology is pleased also to announce herewith the award of its diploma to five senior members of the profession in the indicated professional specialties. These five awards were made on the basis of a review of individual qualifications and without written and oral examinations. These new diplomates are:

*Mary D. Ainsworth	Clinical Psychology
Merrill T. Hollinshead	Clinical Psychology
David Kopel	Clinical Psychology
*Blaise V. Laurier	Counseling and Guidance
Olive J. Morgan	Clinical Psychology

According to continuing Board policy, all previous awards have been announced in the *American Psychologist*.

To date, the Board has made a total of 1,105 awards of its diploma. These awards are distributed as follows:

Diploma awarded to senior members of the American Psychological Association with waiver of written and oral examinations	1,049
Diploma awarded to members of the American Psychological Association by satisfactory performance on written and oral examinations	41
Diploma awarded to senior members of the Canadian Psychological Association with waiver of written and oral examinations	15
Total	1,105

Members. The American Board of Examiners in Professional Psychology, Inc., now consists of the following officers and members: George A. Kelly, president; Donald G. Marquis, vice-president; Noble H. Kelley, secretary-treasurer; Reign H. Bittner, Stanley G. Estes, Harold C. Taylor, Ruth S. Tolman, Austin B. Wood, and C. Gilbert Wrenn.

All correspondence regarding the Board should be addressed to the secretary-treasurer, Dr. Noble H. Kelley, Department of Psychology, Southern Illinois University, Carbondale, Illinois.

* Members of the Canadian Psychological Association.

Convention Calendar

- American Psychological Association:** September 4-9, 1953; Michigan State College
For information write to:
 Dr. Fillmore H. Sanford
 1333 Sixteenth Street N. W.
 Washington 5, D. C.
- American Vocational Association:** December 1-6, 1952; Boston, Massachusetts
For information write to:
 Mr. M. D. Mobley
 1010 Vermont Avenue N. W.
 Washington, D. C.
- American Association for the Advancement of Science:** December 26-31, 1952; St. Louis, Missouri
For information write to:
 Dr. Raymond L. Taylor
 1515 Massachusetts Avenue N. W.
 Washington 5, D. C.
- American Society of Human Genetics:** December 26-31, 1952; Boston, Massachusetts
For information write to:
 Mr. Sheldon C. Reed
 Dight Institute for Human Genetics
 University of Minnesota
 Minneapolis 14, Minnesota
- American Statistical Association:** December 27-30, 1952; Chicago, Illinois
For information write to:
 Mr. Samuel Weiss
 1108 Sixteenth Street N. W.
 Washington, D. C.
- American Anthropological Association:** December 28-30, 1952; Philadelphia, Pennsylvania
For information write to:
 Dr. William A. Lessa
 Department of Anthropology
 University of California
 Los Angeles 24, California
- American Genetic Association:** January 8, 1953; Washington, D. C.
For information write to:
 Mrs. B. C. Lake
 1507 M Street N. W.
 Washington 5, D. C.
- American Orthopsychiatric Association:** February 23-25, 1953; Cleveland, Ohio
For information write to:
 Miss Elizabeth Charleton
 American Orthopsychiatric Association
 303 Lexington Avenue, Room 210
 New York 16, N. Y.
- Child Study Association of America:** March 2-3, 1953; New York, New York
For information write to:
 Child Study Association of America
 132 East 74th Street
 New York 21, New York
- Optical Society of America:** March 19-31, 1953; New York, New York
For information write to:
 Professor Arthur C. Hardy
 Room 8-203
 Massachusetts Institute of Technology
 Cambridge 39, Massachusetts
- Inter-Society Color Council:** March 18, 1953; New York, New York
For information write to:
 Mr. Ralph M. Evans
 Inter-Society Color Council
 Color Control Division, Bldg. #65
 Eastman Kodak Company
 Eastman A. New York
- American Personnel and Guidance Association:** March 29-April 2, 1953; Chicago, Illinois
For information write to:
 Executive Secretary
 American Personnel and Guidance Association
 1534 "O" Street N. W.
 Washington 5, D. C.
- Southern Society for Philosophy and Psychology:** April 3-4, 1953; Austin, Texas
For information write to:
 Dr. Oliver L. Lacey
 Department of Psychology
 University of Alabama
 University, Alabama
- National Association of Student Personnel Administrators:** April 6-9, 1953; East Lansing, Michigan
For information write to:
 Dean Tom King
 Michigan State College
 East Lansing, Michigan
- Eastern Psychological Association:** April 24-25, 1953; Boston, Massachusetts
For information write to:
 Dr. G. Gorham Lane
 Department of Psychology
 University of Delaware
 Newark, Delaware
- Midwestern Psychological Association:** May 1-2, 1953; Chicago, Illinois
For information write to:
 Dr. Lee J. Cronbach
 Bureau of Research and Service
 University of Illinois
 1007½ South Wright Street
 Champaign, Illinois
- American Psychosomatic Society:** May 2-3, 1953; Atlantic City, New Jersey
For information write to:
 Miss Joan K. Erpf
 American Psychosomatic Society
 551 Madison Avenue
 New York 22, New York
- American Psychiatric Association:** May 4-9, 1953; Los Angeles, California
For information write to:
 Dr. Cullen Ward Irish
 1930 Wiltshire Boulevard
 Los Angeles 5, California
- Acoustical Society of America:** May 7-9, 1953; Philadelphia, Pennsylvania
For information write to:
 Dr. Harry F. Olson
 RCA Laboratories
 Princeton, New Jersey
- American Association on Mental Deficiency:** May 12-16, 1953; Los Angeles, California
For information write to:
 Dr. Neil A. Dayton
 P. O. Box 96
 Willimantic, Connecticut
- Association Internationale de Psychotechnique:** July 27-August 1, 1953; Paris
For information write to:
 Pr R. Bonnardel
 41, rue Gay-Lussac
 Paris 5^e, France

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by **L. W. GRENSTED, D.D.**
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Edited by

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AND
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CONTRACT RESEARCH AS A PROBLEM IN THE SOCIOLOGY OF SCIENCE¹

LYLE H. LANIER

University of Illinois

IT is unlikely that a discussion of the effects of contract research upon psychology can arrive at any definitive conclusions—at the present time. The phenomenon is of too recent origin, and too little systematic information is available about it, to justify any general propositions concerning either empirical relationships or theoretical interpretations of their significance. We have some isolated facts as to the amount of money expended on psychological research contracts, mainly during the past six years. And we have some rather confused impressions as to the attitudes of various kinds of psychologists concerning the desirability of research contracts. But we should need to have something in the way of a research appraisal of the situation before we could claim to have even the beginning of a general understanding of the cultural pattern called “contract research.”

In the absence of definitive knowledge, it occurred to me that a contribution might be made towards the understanding of the problem through a sort of “methodological” analysis of some of the main issues. If we cannot give answers now to these important questions, we might at least hope to get the questions clarified and to point the way towards promising approaches to the derivation of answers. That is the primary purpose of the present paper.

I shall restrict this discussion to three classes of issues, which can be stated in the form of commonly expressed antitheses:

1. That contract research involves undesirable external control over scientific inquiry, in contrast to the freedom of investigation necessary to productive scientific effort.

2. That the “organized” group situation characteristic of contract research involves bureaucratic planning and that this kind of “internal” constraint militates against both the creativity and the efficiency of the individual scientist.

3. That the research contract predominately calls for *applied* research, thus distorting the pattern of scientific development away from *basic* research.

I think that some perspective upon these problems can be gained if they are viewed in the larger context of the “sociology of knowledge”—an approach with which most psychologists, including myself, are not too well acquainted. We tend to assume somewhat naively that science, like Topsy, “jest growed,” or else that it has developed by arbitrary expressions of “free will” and creative imagination on the part of isolated scientists. Thus the “dynamics” underlying the development of science tend to be conceived in terms which are strongly at variance with the assumptions underlying our scientific explanations of human behavior. But there is great likelihood that much of this folklore will turn out to have no greater validity than many other common-sense notions about causal relationships in human behavior and in social institutions. I strongly predict that the application of scientific method to the study of scientific behavior and its institutional counterparts would increase our control over these events in quite the same way as happens in respect of other natural phenomena. But enough of general argument for a “science of science!” Let us examine our three sets of issues within this general frame of reference.

External control vs. freedom of scientific inquiry. The general question here is what determines the course of scientific inquiry, in whatever might be conceived to be a “normal” course of events. Implicit in some of the argument on this subject is the notion that a sort of “free-floating” love of knowledge for its own sake is the primary motivation. Such scientific curiosity (in some unexplained way) gets channelled towards some restricted sphere of nature, and then the scientist’s behavior is presumably governed by the objective structure of the situation. He ostensibly enters into a kind of isomorphic relationship with reality, in which the choice of problems, concepts, and hypotheses come into happy congruence with the natural dimensions of the situation. This Kantian-like process would be, I suppose, the kind of meaning some people attach to the term “pure science.”

If I have overdrawn this picture of “free” scientific behavior, it is primarily as a device for as-

¹ Contribution to a symposium at the Midwestern Psychological Association, Cleveland, Ohio, April 25, 1952.

serting the absurdity of the view that science is not controlled by cultural, situational, and personality variables. The cultural heritage, including especially the system of intellectual and scientific values, which produced structural psychology did not leave Wundt and his successors "free" to conjure up behaviorism or psychoanalysis. They didn't have a contract with the government, but their "freely" chosen scientific behavior led them nevertheless into the most colossal blind alley in the history of psychology.

I do not mean at all by this rhetorical argument to deny that "external" control of scientific activity can have a deleterious influence upon scientific development. My purpose mainly is to emphasize the fact that there are many kinds of controls operating in the determination of scientific behavior, particularly in the choice of problems for investigation. In accordance with John Dewey's general position, it would appear that scientific investigation arises always in response to what he calls a "problematic situation." The choice of problems will be determined by a variety of conditions, including particularly the value system of the culture in accordance with which individual scientists are rewarded or punished. There is no *a priori* evidence that the problems chosen "freely" by a scientist operating only under the multiple compulsions of his cultural and personal dynamics would be any more fruitful than problems arising as objective difficulties or dilemmas within his society. In general terms, "contract research" represents a reflection of those "problematic situations" which have been judged by various social groups to be strongly in need of resolution. These judgments are not necessarily any more valid than those of the isolated scientist. But, on the other hand, these socially defined problematic situations are not necessarily any more arbitrary as determiners of scientific behavior than are the mores and the reward system operating through more usual institutional channels. In short, I would stress again that we have here some very important issues for research. If we could by scientific means, or at least by somewhat objective consensus, set up criteria and establish procedures for the investigation of these issues, then we should be in far better position to answer the kinds of questions before this symposium. In the light of the knowledge gained through such an approach, psychologists and contracting agencies could probably reach wiser decisions about priorities in the choice of research problems than is now possible. Such knowledge would provide a more rational basis for "control" of research than either the isolated

research requirements of individual contracting agencies or the isolated research whims of the individual scientist.

Group vs. individual research. One of the obvious consequences of the postwar expansion of contract research has been a great increase in group investigation. If the quantity or the quality of scientific psychology has been appreciably affected by research contracts, one might reasonably suspect that the collective character of the group research process is partly responsible. Organized group relationships inevitably involve difficulties of communication and coordination. There must be some degree of centralized planning, and there is very likely to develop a considerable amount of bureaucratic red tape. One consequence of these conditions is rigidity in the face of changing situations that demand rapid shifts in research tactics. The sudden insights of the creative individual do not articulate well with the fixed design that emerges from the staff conference or from the project director.

These and related unhappy possibilities lead many psychologists to conclude that group research is well suited to the routine collection of masses of data but not to the generation of original scientific ideas. In this view, the free enterprise of the scientific entrepreneur will yield a scientific product better in quality and greater in quantity than the torturous output of the bureaucratic machine. It should be noted, however, that this conclusion is reached in the absence of evidence as to the efficiency of the general population of isolated individual scientists. In fact, there is not much systematic evidence available concerning the effectiveness of either pattern of investigation. But the stereotype of the creative scientific thinker emitting original ideas in a free state of nature is commonly invoked in arguments against the dead level of mediocrity and inefficiency of group research. At the level of evidence involved in such debates, it is not difficult to invoke another stereotype of the individual researcher: the pedestrian teacher-scientist whose freedom carries him through his daily classes, interviews with students, committee sessions, an hour occasionally in the laboratory, and much time spent in the manufacture of furniture in the basement shop.

Let us hope that neither of these pictures represents the typical condition for its respective pattern. If these characterizations have any justification in this discussion, it is that of stressing the desirability of genuine research upon these diverse modes of scientific activity. With respect to group research, I think that we must rapidly learn how to increase

its effectiveness. There are undoubted values in group discussion and planning; I think that they can be realized without the suppression of individual initiative and creativity. But we have a long way to go in research administration before reaching these goals.

The complexity of most psychological problems is such as virtually to require collective effort if an appropriate experimental attack is to be made upon them. Probably one reason for the marked deficiencies of psychological science in respect of its most acute problems is the historical dearth of concerted planning and of coordinated effort in the execution of research plans. Our individualistic research has been sporadic and unnecessarily idiosyncratic in nature. We have too many odd lots of incommensurable data. For all of its complications, group research affords the opportunity of building sound empirical foundations in fields where contradictory results and random speculation have been our main stock in trade.

Applied vs. basic research. The standard argument on this issue is that the research contract usually requires the psychologist to solve some quite specific "operational" problem, in terms of relationships among variables defined in common-sense, practical terms. Such research may be a model of experimental design, statistical analysis, and logical inference. The results may lead to quite effective management of the specific behavioral situation. But the relationships and techniques are not generalizable because the investigator did not formulate the problem in terms of hypothesized relationships between general classes of dependent and independent variables. Such research would not contribute much to the general body of scientific knowledge in psychology.

Unquestionably, a considerable amount of contract research has had this "applied" character, and much of it may well continue to be like that. There are problems and occasions where the specific solution is urgently required in the public interest. If the psychologist, through research, stands a reasonably good chance to gain control over the "operational" situation, then he will be fully justified in restricting his work to this specific "target."

But I believe that the normal peacetime pattern of contract research by no means necessarily involves the kind of dichotomy implied in the "basic vs. applied" antithesis. Contract research will always be *selective*, but so is research supported by foundations, universities, and virtually all other social institutions. Hence the research undertaken must fall within the general area under investigation

and should have a reasonably evident scientific relationship to the problem specified in the contract. But as a rule both the contractor and his sponsor are interested in the scientific solution to the problem—and in terms that will maximize the applicability and predictive power of the solution. Such a solution, I am convinced, is ultimately the one formulated in terms of a general law that describes the relationships between the *scientifically* defined variables.

I should like to qualify this conclusion by saying something about research tactics. Perhaps the most important step in research upon a new problem is the choice of *relevant* variables. This is often attempted on an a priori basis, followed by laboratory investigation without benefit even of exploratory empirical study of the situation in which the problem arose. I should like to propose the general consideration that a dual pattern of "operational" and "laboratory" research—carefully coordinated—will usually be more effective. In the process of acquiring "applied" control over selected aspects of the concrete situation, the investigator should learn how to analyze the problem into significant variables and to formulate hypotheses concerning their relationships. Thus "applied" and "basic" research can be integrated into a pattern of mutual reinforcement.

Conclusions. By way of summary I should like to stress the following points:

1. Contract research in psychology is one aspect of a more general cultural pattern, in which solutions to important social problems are being sought through systematic resort to science and technology.

2. In contract research, control of the research process is a joint responsibility of contractor and contracting agency. Both have the obligation to utilize scientific resources so as to maximize the over-all social value of the research process. Neither has the right to waste these resources on trivial problems—whether "applied" or "basic" in nature.

3. There is growing need of improved methodology and technological skill in the organization, conduct, and appraisal of psychological research. Scientific behavior—individual and group—should be amenable to investigation by the same scientific methodology that psychologists and social scientists use in the study of all other behavior. An adequate "science of scientific behavior," with appropriate technological counterparts, should resolve many of the problems that arise from contract research.

THE EFFECTS OF GOVERNMENT RESEARCH CONTRACTS ON PSYCHOLOGY¹

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THE desire for a discussion of the effects of contract research upon psychology arises quite understandably from hopes and fears of the relatively enormous amounts of money which support such research—enormous amounts in the experience of psychologists, at least. Will this money be used to increase the understanding of human behavior? Will it divert psychologists into the market place? Or, to state our questions in a form which may assist positive thought about them, what conditions must exist if this money is to have a beneficial rather than a detrimental effect upon psychology?

There would be no problem, and no need for this symposium, if the amount of money involved were small. It is not small; it is very large indeed. At the present time and with the sources readily available to me, I cannot say precisely what the amount is. However, on January 1, 1952, the contract program of my own organization, the Human Resources Research Center of the Air Training Command, was supporting, in whole or part, the salaries and research costs of 185 professionally trained individuals. In round numbers the contracts provide a total of about 90 man-years of research time, nearly all in the field of psychology and a considerable part at the PhD level. The Human Resources Research Center is only one of a number of comparable organizations in the government. The number of psychologists involved in doing contract research must be very large indeed, and the problem of the effect of contract research upon psychology is not negligible.

There are certain barriers to clear thought which must be eliminated before we can formulate the conditions which will permit this money to have a positive effect upon psychology. These barriers may

be typified by several conventional terms, which have come to be emotionally-toned and which express supposed antitheses. The first of these supposed antitheses is that of basic and applied research. The second is the conflict of interest which is supposed to exist between the buyer and seller of a product which in this case is psychological research; a conflict which might be represented by the phrases "Don't sell your soul for a mess of pottage" and "Let the buyer beware." The third is the conflict between the needs and interests of the individual psychological research worker and the society in which he lives. These three antitheses are related to one another in that the individual research worker is conceived to feel forced by financial and social pressure to become the producer and seller of a product, which in traditional academic thinking is of low grade, namely, applied research. Society, on the other hand, is conceived to be forced by the temporary pressures of world politics and world revolution to become the buyer of this same product. In this process the production of an alleged high-grade product, basic research, is reduced in amount or the product is depreciated in quality. It is my contention that these antitheses are unrealistic and need not necessarily exist. If they are examined carefully perhaps we can think rationally and positively, rather than emotionally and negatively about the effects of contract research upon psychology.

What is basic and what is applied research in psychology? As a former student of auditory processes, as such processes appear in the electrical activity of the eighth cranial nerve and the auditory organs of the katydid, cricket, frog, turtle, pigeon, guinea pig, or cat, I can testify that much of the information which guided my research originally came from medical men concerned with deafness and from acoustical engineers concerned with communication. Much of the information, in other words, required for basic research came from men whose motivation was application. On the other hand, the trouble with the

¹Contribution to a symposium at the Midwestern Psychological Association, Cleveland, Ohio, April 25, 1952. The views expressed are those of the author and do not necessarily represent the official views of the United States Air Force.

treatment of deafness and the development of good communication equipment was, frequently, the lack of a good, solid theory of hearing. There was no antithesis between basic and applied research in the field of hearing. There was only good and bad research and all degrees between. I do not believe that one type of research was superior in quality to the other. Of course it saved thought, if a particular study happened to be poor *and* applied to speak of the dangers of application. Or, if a particular study happened to be poor *and* basic, it saved thought to refer to "the ivory tower." In these cases thought was possibly abbreviated by epithet; nevertheless, the applied people routinely developed theories of hearing, and men in ivory towers routinely advanced ideas of how to improve communications.

Dropping, for the moment, the supposed antithesis and proper definition of basic and applied research, let us consider the buyer-seller relationship in contract research. Is there a conflict of interest here, such as commonly is supposed to exist in the market place? Are contract research psychologists selling their souls for a mess of pottage? Should the buyer beware? What is the pottage in this case and of what must the buyer beware? Upon inspection the pottage turns out to be digestible, at least in part. It includes money with which to purchase adequate equipment, to obtain clerical and statistical help, and to subsidize graduate student assistants while they learn research by doing it. It also includes, and dangers as well as benefits may be expected here, salary raises and increases in prestige.

Well-managed contract research may also provide for research programming; that is to say for a concerted attack on a whole area of psychology by a team of separate individuals and institutions. There is strength in team work, and we may anticipate that programmed research can advance psychology, both as science and as technology, far more rapidly than psychology has advanced through the uncoordinated efforts of individuals. Clearly, however, participation in team work means some loss of independence for the team members. And there is danger that some team leaders will be uninspired or incompetent.

In addition to these dangers, there are others. One of them is paper work; for this the remedy is an effective administrative staff. A second danger, sometimes, is excessive travel and time spent

in so-called coordination with other research workers. A third is that support once granted may sometimes be lost in the huge shuffle of government budget-making. A fourth, perhaps the most important of all, is that excessive time may be spent in research on highly specific, limited-purpose investigations.

My point in outlining these dangers in contract research is that there is no conflict of interest between the seller and the buyer of research in respect to them. These are the aspects of contract research which constitute pottage unworthy of the soul. They are also the very dangers of which the buyer must beware.

The third antithesis referred to above is between the interests of the individual psychologist and his society. University psychologists are jealous of their right to do research on problems of remote social interest. On the other hand, society can be greatly helped now by application of the knowledge which psychologists have or can obtain through proper research.

It is sometimes suggested that we are now in a temporary emergency in which the individual should sacrifice his accustomed indifference to the common need. I do not believe that the emergency period in which we are now living is truly temporary. I do not believe that there is a greater emergency today than there has been for the past forty or fifty years, or that the next fifty years will see a return to a non-emergency situation. There is no special emergency now, differing from the emergencies of the depression periods, the war periods, and the prosperity periods of the past fifty years. The only change is in the clarity with which we recognize that society needs psychological help. The requirement for that help continues at all times, whether or not we recognize it. Psychologists, like other members of society, must assist society. The problems are to render effective assistance and to integrate individual and social needs.

The problem of individual vs. social interests relates back once more to the problem of basic and applied research. As A. W. Melton pointed out (1) in a discussion at the University of Pittsburgh, many psychologists sometimes seem to define basic research as "what I want to do, whatever that is, and whenever the mood strikes me," whereas applied research means "research which someone else wants me to do, with his own practical purposes in mind." We are prepared to quarrel with any psy-

chologist who uses these definitions, since the real interests of the individual psychologist and his society are not so diverse that they cannot be integrated.

With this introduction and, I hope, rejection of false and distracting concepts, we can think constructively of how to realize the maximum benefit for society, for psychology, and for the individual research psychologist from the money pouring into psychology through research contracts in support of the mission of some government agency. I suggest that there are at least two conditions which must exist, and which all concerned must recognize clearly, in order to realize our common objective. These conditions are: first, the mutual participation of buyer and seller in the planning of research programs; and, second, the recognition of the kind of psychological research which is really required to assist the government.

The buyer and seller must mutually participate in planning contract research. To me this means that the government should not attempt to operate a program of grants-in-aid under which university psychologists would propose any idea whatever for support, and support would be forthcoming if the individual seemed worthy and the idea, considered for itself alone, seemed sound. Contract support would usually be given only to extend in-service research programs. On the other hand, this condition also means that the university psychologist who desires contract support would spend some of his time becoming familiar with the real needs of the government and with the in-service programs. On this basis he could effectively help plan how to integrate his own activity with that carried on in-service.

The second essential condition is a requirement for the agent of the government to recognize what kind of research the government really needs. The government always needs information by which to decide how to act on questions of the moment. For this reason there will be continual pressure on the part of the government for highly specific, limited-purpose contract research.

What kind of research does the government need? For a great many of the military problems which arise from day to day it can be said that the problem is not new. It has arisen again and again in the past. Over the years the trial and error process has resulted in "know-how" with respect to these problems, a know-how which is not accompanied by

insight and hence does not necessarily provide for optimal solution of the problem but which does provide a partial solution. This know-how exists in the minds of some, at least, of those who have *managed men*.

As an example consider our present need to use men of low mental ability or men with physical defect in the military service. A limited-purpose, special, psychological research project to identify the jobs in which low-level men can be used has been suggested. Should it be accepted? This military problem is not new. It has existed in the military, and in industry too, for many years. It is very probable, in my opinion, that psychologists are less able to identify such jobs than are those with years of experience in dealing with men of low ability. The psychologist might, it is true, advise and help management to solve other aspects of this problem. To offer to do research on the specific problem suggested, however, would render him suspect of selling his soul for a mess of pottage. Such an offer may prevent the government from rapidly solving the problem by referring it to the management people who are probably best able to help the government at this time.

I believe that this concrete example could be repeated again and again and that there is a general principle here: specific, limited-purpose psychological research is not usually needed by the government to achieve reasonable solutions to those human problems which have existed and been recognized for many years. To justify such research from any point of view the problem must be very important and there must be important reasons for believing that a common-sense know-how does not exist.

Turning to more positive suggestions (which have been developed by Melton in the address referred to above), let us consider another concrete military problem, that of the human factor in the maintenance of electronic equipment. The need for research here arises in great part from the complexity of the equipment and from the rapidity of changes in it. The equipment is so complex that high-order skills and knowledges are required to maintain it in working condition. The equipment is used in quantities such that many, many recruits must be selected, and trained until they possess these skills. The need for psychological research is great. What kind of research is needed?

In his discussion Melton develops at length and, in my opinion, soundly, the point that the only

way that the psychologist can work profitably here is to be analytic. He must identify the required aptitudes, and the knowledges and skills and their learning, by reference to meaningful psychological categories, dimensions, and processes, such as rote learning, perceptual skill, judgment, personality, motivation, etc., and relate these in turn to stimulus dimensions and dimensions of behavioral variation. When this is done the psychologist is working in terms of independent and dependent variables which have general psychological significance. At this point, Melton suggests, the research is truly *basic* even though its motivation be application and even though application results from the research.

This same need for basic research, so defined, Melton points out, results from the rapid change in military equipment and from rapid change in ways of maintaining it. The change in jobs is often so rapid that much suggested specific research cannot even be completed before the need for it has passed.

Finally, I suggest, the very multiplicity of government problems means that it is impossible to conduct research specific to each. This multiplicity can be a trap for the unwary, as witness, for example, the dictum, which several of us supported in the last war, that every training device should be validated. This is a noble principle carried over by extension from early, and proper, attitudes towards mental tests. I venture to say, however, that if every psychologist capable of research on the validation of specific training devices were to engage in it, there would still be many, many such devices in use and unvalidated at the end of a considerable period of time. The multiplicity of these devices makes limited-purpose validation studies impossible. The same conclusion can be drawn in each of many fields of psychological research.

While the arguments against specific, limited-purpose contract research are clear, they do not prove that contracts should be let in the spirit of the grant-in-aid. The motivation for letting contracts remains application: society's need for the solution of its problems. This is the taxpayer's

motivation; it should be acknowledged and satisfied. This should be part of the motivation of each of us as individuals in a society where normalcy is emergency. There should be no difficulty here, no defense of systematic, generalizable, analytic research by confused reference to the value of knowledge for the sake of knowledge alone, or by any claim to be concerned with the social problems of twenty, fifty, or one hundred years hence. Even if the difficulty really existed, the very multiplicity of problems would permit an informed contract research psychologist to choose an area of research in which he is interested, in which systematic studies are more useful than any others, and in which generalized application will necessarily occur if such studies are successfully carried out.

There is no need then to place basic and applied research in opposition to one another in this context of contract research. Both the buyer and seller, both society and the individual are interested in the same kind of research. This kind of research is systematic, generalizable, and analytic. It is, therefore, basic research but the primary reason for pursuing it under contract is application. To secure such research the university psychologist must participate with the government contracting agent in the planning of the research.

When these conditions are satisfied, the effects of government contract research will be beneficial to all. At least one problem will remain, however. Does psychology contain within itself the genius required of its buyers and sellers of contract research to plan, conduct, and apply research of the character required to solve the government's human problems?

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GOVERNMENT SUPPORT OF RESEARCH AND ITS INFLUENCE ON PSYCHOLOGY¹

JOHN T. WILSON

National Science Foundation

IT occurs to me that without stretching the point too far, the subject of this symposium might well have been "The Child from One to Six." Omitting the prewar and war years, during which the government, under the auspices of NRC and NDRC supported several psychology programs, we have enjoyed about six years of federal nurture of psychological research on a relatively large scale. The absence of norms would render it difficult to judge the youngster's state of development, but perhaps we could at least determine whether we have a budding genius or a little monster on our hands.

Before discussing what to me are some interesting and important effects upon psychology which derive from the various government contract and grant programs, I should like to remind you that I no doubt will reflect to some measure certain biases and values which are due in part to three years' association with the Human Resources Division of the Office of Naval Research, and to a more recent and continuing association with the Biological Sciences Division of the National Science Foundation. What follows has grown out of these experiences and out of interactions with other research administrators, with advisory panels, and with psychologists doing research under government contract or grant.

To review the more recent chronology leading up to the subvention of psychological research as we now know it, recall that the end of the war brought to a finish the support of research through the NDRC. In August of 1946, the Navy Department's Office of Research and Invention was replaced by the Office of Naval Research, which was the federal government's first systematic peacetime effort to support scientific research by contract. Psychology has been a part of the ONR program almost from the beginning.

¹ A paper given as part of a panel discussion on "The Effects of Contract Support of Research on the Field of Psychology," at the Midwestern Psychological Association Meetings, April 25, 1952, Cleveland, Ohio.

The opinions expressed in this paper are those of the author, and should not be construed as necessarily reflecting those of the National Science Foundation.

In 1947, as a part of the National Security Act, the Joint Research and Development Board (later the Research and Development Board) was created as the agency of the Department of Defense for coordinating the research and development programs of the three military services. One of the twelve committees of the RDB is the Committee on Human Resources, whose responsibility is to guide and to evaluate research and development in psychology and allied social sciences within the Army, the Navy, and the Air Force. Under the cognizance of the Human Resources Committee there are five areas of research which are of direct and tangential interest to psychologists. These are: psychophysiology and human engineering, personnel research, training research, manpower research, and research in human relations and morale. Although psychology is the discipline most prominently represented within these areas, there are other subject matters involved which are related to but are not psychology, and therefore the term "Human Resources" was adopted by those responsible for the formation of the Committee, as a sort of compromise label to cover the aggregate.² Contract research is supported in all of these five areas by the Army, the Navy, and the Air Force, although the level of support varies from one service to another, and within each service from year to year.

While these events were taking place within the military, research-supporting programs were being developed in nonmilitary government agencies. At the close of the war, the Institute of Mental Health, within the Public Health Service, was established to administer federal funds in support of extramural research in mental health fields, one of which is psychology. Sponsorship of contract research in psychology also was initiated and is continuing on a modest basis within the Veterans Administration. And, about a year ago, the National Science Foundation was established and has within its Biological

² In this connection, it is of interest to note the recent change in name of the division which supports psychological research within ONR, from "Human Resources Division" to "Psychological Science Division."

Sciences Division a supporting program in general experimental psychology.

These, briefly, are the highlights of the evolution of the federal government's current contract and grant research programs in psychology. There are one or two other smaller oases which have not been mentioned by name, so that in all, there exist some nine or ten governmental sources of contract or grant support for research in our field. In terms of dollars, the annual rate of support for extramural research in psychology and closely related disciplines has been reported as being in excess of two million dollars a year since 1948 (8). This is undoubtedly a conservative figure, since in fiscal 1951, the Department of the Navy and the Department of the Air Force each contracted for more than one and one-half million dollars worth of research in Human Resources. During the current fiscal year it is estimated that there will be something on the order of eight million dollars available from the numerous agencies of the federal government, for the support of psychological and allied research by contract and grant.

What can we say about the effect upon the field of psychology of this rather extensive research support? I am not sure that we can say very much, if our criterion of acceptability for the things we say is that they be based upon systematically obtained data. To my knowledge, although there is continuing review of specific programs within almost every department or agency, there has been no systematic assessment of the effect of the whole of contract research on psychology. As a matter of fact, until the advent of the National Science Foundation, no agency existed whose mission was broad enough to include this responsibility.

Suppose we were faced with making such a study. What might one think of as possible impacts on psychology arising from extensive governmental subsidies for research?

Two immediately obvious points that come to mind and that are frequently used as justification for the continued and increased support of research by contract are (a) that there will be a rise in the quantitative productivity of research in psychology, and (b) that there will be an increase in the number of young research psychologists as the result of extensive training opportunities within the various contract programs. Accompanying these quantitative effects will almost certainly be some qualitative impacts, but one would probably throw up his hands in despair of trying to arrive at satisfactory judgments of these.

Out of curiosity to see what has resulted in the

way of quantity of published research papers from one contract research effort, I took a sample of 66 projects from the programs of the Psychophysiology Branch, the Personnel and Training Branch, and the Human Relations and Morale Branch of the Office of Naval Research, and tabulated the number of publications per contract year. All of the projects had been in operation for a minimum of two years, so that sufficient time had elapsed on each to allow for publication time-lag and for the inertia of getting under way with the research. The sample was homogeneous in terms of project size, and it involved a mixture of basic and applied problems. The 66 projects totalled 235 project years, during which time 343 research reports, theoretical papers, and books had been published, making the mean about 1.5 publications per contract year. The range was from zero to five papers per contract year, with several projects falling at each end of the distribution. The modal number was two published papers per year. The number of graduate research associates receiving training on the projects ran between two and three per project.

Let me hasten to point out that one does not judge the merit of a research program or a project solely upon the number of published papers it produces or upon the number of students it trains. Nor should anyone infer that there is necessarily any delinquency involved when a project produces no publication during its lifetime. There are many acceptable reasons for such an event, and the point is merely to indicate the limits within which one may reasonably expect, under relatively ideal conditions, to enhance the quantitative productivity level of psychological research through the support of research by contract.

To go beyond the important and beneficial consequences of stimulating research output, and training more research psychologists, what other impacts might one expect? With reference to psychology as science, one might look for influences on the content and the direction of research in the field, possibly dictated by such factors as the areas of interest of the sponsoring agencies, their demands for applied versus basic research, or from the influence of overcommitting research personnel to contract as opposed to traditional academic-type research.

With a view to teasing out possible influences of contract support upon the content and trend of psychological research, I reviewed some three hundred line titles and abstracts of research projects within the extramural research programs of the three military services, the Public Health Service, and Veterans Administration, to see what trends, if

any, were detectable in terms of areas within the field which are being supported. Allowing for the difficulty of judging project content from titles and abstracts, it is immediately obvious from such a review that most contract programs reflect support of a surprisingly wide range of subject matter. Traditional areas such as personnel research, psychophysiology, and human engineering are prominently supported. However, one can also find evidences of departures from traditional areas in the support of projects on thinking and problem solving, projects on quantitative methods, and in the rather heavy support of research on the psychodynamics of personality.

On contract projects such as Project RAND, and the Army's Operations Research Office, as well as on projects at the Navy's research laboratories, one finds psychologists participating in rather unusual research activities on problems of operational analysis, psychological warfare, and communications research. There is relatively little support to be found, however, for general experimental and physiological psychology, as contrasted with the psychophysiology of vision and audition, and there is rather meager support for developmental and comparative psychology.

One very outstanding effect upon the content and trend of psychological research which is directly related to contract research support is the extensive amount of research in human relations. For the uninitiated, human relations research is concerned with such problems as interpersonal relations, group behavior, morale, and leadership. A major patron in the support of this area is the Office of Naval Research, which has had projects in human relations since 1946. The Air Force, within its several Human Resources programs, and to some degree under Project RAND, has been active more recently in supporting this field, and the Army is currently getting under way with research in human relations within the program of its Human Resources Research Office. I would like to call your attention to and recommend for study a report on the research sponsored by the Human Relations Branch of ONR, which has been published under the title *Groups, Leadership and Men*. This book includes, in addition to reports of research projects, a short historical account, as well as a summarizing critique of the program.

To indicate something of the content of research programs in human relations, one finds projects on "Informal Communication in Small Groups," "Research in Contemporary Cultures," "Leadership Identification and Acceptance," and "Psychological

and Sociological Methods for the Analysis of Foreign Areas." There has been to some extent on such projects a fruition of the concept of the interdisciplinary research team, with investigations being planned and executed on a somewhat grander scale than has been the case in other areas of psychology. One also gains the impression that in the interests of getting at problems of "real-life" behavior there sometimes has been a relaxation of the standards of research rigor normally found in the more firmly established areas within psychology, and there is frequently reflected, in human relations studies, a mixture of social *service* and social *science*.³ With talk of a "total push in social science" (3, p. 263) and "A Manhattan Project for the Social Sciences" (4), we may anticipate a continued interest in contract support for human relations research.⁴

In addition to the direct effect of the human relations research programs on the content of psychological science, there is a sort of second-order effect on the field of psychology which I would like to mention. This has to do with the relationship between psychology and other academic disciplines. It is evident within the various human relations programs that there has been a sincere and effective attempt to achieve a *rapprochement* between psychology, especially social psychology, and related social science disciplines such as anthropology, sociology, and political science. It is further evident that the *rapprochement* is intended, in the future, to go even further. For example, in *Groups, Leadership and Men*, it is pointed out that the present exclusion of economics and history is based

³ Darley's comment in the summarizing chapter of *Groups, Leadership and Men* is germane to the issue. He notes that research on group phenomena is inescapable, but that in its execution we should demand that it "be as carefully formulated and explicitly done as studies of individuals. This does not mean that we favor laboratory research over field research, or 'pure' research versus applied research. We would only demand that any experiment be carefully done, without immediate concern for pressures to produce, to solve practical problems, [or] to eventuate social change" (3, p. 265).

⁴ In connection with the drive for recognition on the part of applied human relations research groups, it is interesting to note that Sibley reports (9, p. 5): "In studying the operations of a social research staff which was established a number of years ago by a very large corporation, Robert Merton has made the highly interesting observation that the staff did its best research, in terms of depth and breadth of significance, at a time when the principal officers of the company showed little interest in the work. Once it was recognized that social research could be practically useful to the management, appropriations for it were increased and the staff was enlarged, but the work done became increasingly routinized and less original in its conception."

on "many pragmatic and special reasons . . . but we may reasonably question whether [their] continued absence will represent a healthy state of affairs in the broad domain of socio-psychological research . . ." (3, p. 10). Such statements indicate a high degree of enthusiasm for coalescence between psychology and the social sciences, which, if successful, would represent a rather striking effect in the direction of a synthesis of knowledge in the social science domain.⁵

To return to the more direct effects of contract research on psychology, there has been in addition to the previously noted organization of research, a high degree of organization for research within the various supporting programs: I refer to the study groups, advisory panels, working groups, inter- and intra-agency coordinating groups, executive committees, and just plain committees which have been formulated for the purpose of coordinating, reviewing, and evaluating research programs. These have resulted in greatly increased interaction and co-operation, as compared to say ten years ago, between psychologists and public institutions underwriting contract research programs. That this practice has had a salutary effect upon both parties is generally well recognized. However, there is also little doubt that there have been impacts of a less desirable nature upon psychology from the widespread use of advisory panels, constituted from highly selected samples of the population of research psychologists in various areas of psychology.

Presumably with sufficient funds to underwrite every proposal which is received, a research ad-

⁵ It is interesting to note that in the Harvard Report on *The Place of Psychology in the Ideal University* (6) this problem was discussed at length. To quote the report (p. 3): "the inevitable tendency (of psychology) will be to extend and develop affiliation with the social sciences—sociology, anthropology, and government—though such affiliation does not imply an uncritical acceptance of their doctrines." The report adds that "Nothing in this report is intended to suggest that such areas of conceptualized institutional behavior as economics, political science, history, or parts of sociology are, as such, part of the central subject of psychology." The essence of the problem is reflected in a footnote on page 5, written by Hunter and Bernard, which states that "The essential points that need to be made are: (1) sociology and psychology are different fields although related in the study of group behavior. (2) The methods used by the social psychologists are (a) widely used by sociologists and (b) require very little knowledge of science other than a part of psychology. (3) There is widespread practice of requiring little or no scientific training for budding young social psychologists with the result that the name psychology covers both scientists and non-scientists who do not speak each other's language and who have less of a common scientific background than do geologists and zoologists. . . ."

ministrator in an agency whose mission is the support of research in general might operate on the basis that any proposal could be justifiably supported without further evaluation if it had been conceived by a reputable research psychologist and had the approval of his department head and his university. This view is reflected in a statement of Dr. C. E. K. Mees, the director of research at Eastman Kodak Company. Dr. Mees says:

The best person to decide what research is to be done is the person doing the research. The next best is the head of the department. After that you leave the field of best persons and meet increasingly worse groups. The first of these is the research director who is probably wrong more than half the time. Then comes a committee, which is wrong most of the time. Finally there is the Committee of Company Vice Presidents, which is wrong all of the time (2).

Unquestionably, there is a real dilemma both in the use and in the extent to which one places responsibility upon advisory panels for the evaluation of proposals and for the development of research programs. For panel membership, one tries to attract those individuals who are among the most competent in a given research area, but in so doing he is faced with the decision of either excluding these persons from support within his program or receiving advice on new proposals and on contract renewals from individuals who are themselves contract holders within the same program. A somewhat related problem is that of the perpetuation of the panel membership, with the resulting growth of vested interests in certain types of proposals.

Among various contract programs for psychology one finds instances where no advisory panels are employed, with the agency's internal staff assuming the responsibility for review of proposals. On the other hand, one finds cases where advisory groups are almost solely responsible for the development of the program and for the selection of projects which are approved for support. Within various advisory groups, the practice ranges from that under which none of the members of the panel is permitted to hold a contract, to that under which virtually every panel member also is a contractor.

Under conditions where one has more proposals for research than can be supported by the total funds available, which normally has been the case, there is considerable competition among proposals, and the tendency in advisory sessions is to approve those proposals which, to the group, seem to have the most merit and hold most promise of success. To a large measure, the judgment of the group is based upon an evaluation of the known capacity of the investigator or the reputation of the insti-

tution which he represents, with the obvious advantage lying with established organizations and persons whose qualifications and achievements are well known to members of the evaluating group. Also there is frequently a tendency to favor proposals involving familiar research techniques over those reflecting new ideas, the attendant result being to jeopardize the chances of support for young unknown investigators and for proposals which represent heterodoxical ideas. Sibley, in his recent monograph on the support of individual research workers (9), for example, has reported that scholars between the ages of thirty-five and fifty receive considerably more financial aid than their colleagues below these ages. Within contract research programs supporting psychology, there is some evidence of a concentration of support in better-known departments and with well-established investigators.

That there are wide differences of opinion with respect to the utilization of advisory committees in the contract programs is evident in a quotation from a recent publication by Ahlberg and Honey (1). They say, as the result of an intensive survey with research administrators:

Problems such as these have resulted in rather frequent recommendations that the functions of such committees be severely curtailed. Several administrators have expressed the opinion that committees whose members are drawn from private life should not be given the responsibility for screening and approving applications for contracts, grants or fellowships. They suggest that the function of such committees appropriately should include review, in terms of need and emphasis, of the programs which the administrator and his staff have approved, and evaluation of these programs upon completion. On the other hand, other administrators have held that the device of administering grant and fellowship programs through committees composed of people drawn from public life has been largely responsible for the success of such programs (1, p. 19).

One can find many other interesting and important effects on psychology which relate to contract research programs, but which cannot be discussed in detail. For example, there have been influences upon academic departments from such factors as the proliferation of new psychological research groups within both the academic and business world. There are also, no doubt, departmental frustrations which can be traced to the increasing importance of the business office within the academic structure. In another domain, one can see important impacts on communication within psychology—improved communication through the many symposia and conferences which have been sponsored by contract programs, and heightened communication problems because of increasing time-

lag in the journals, and because of the advantages for project holders over non-project holders in the payment of publication costs by some contract programs.

In general, there is little question that the effect of the various contract and grant programs has been to strengthen psychology both as science and as a profession. That there are some sticky problems relating to such programs should be neither surprising nor particularly disquieting, if we are alert to them. As our clinical colleagues will tell us, life is full of problems.

In closing, I would like to make a suggestion—a suggestion which relates to a point noted at the beginning of this paper—that no systematic study of the effect of contract research upon psychology has yet been made. My suggestion is that the time has arrived for a serious stock-taking in psychology, not only with reference to the effect of contract programs on the field, but with reference to the status of psychology as science. It seems most appropriate that, as psychotechnologists, we apply to ourselves some of the mechanisms; such as performance criteria, which we so enthusiastically develop for others, and that, as behavior scientists, we lead the way in exploring how we, as scientists, behave.

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CONTRACT SUPPORT OF RESEARCH IN PSYCHOLOGY¹

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SEVERAL years ago, at the 1938 APA meetings if I remember correctly, a symposium was held on the topic of the dismemberment of psychology. It would appear that this unhappy event never came to pass, for now we are discussing the impact on psychology of kinds and amounts of financial support undreamed of at the earlier meeting. The three speakers on this symposium have ably presented the great advantages that may accrue to psychology from large-scale governmental financing. They have pointed out from their own rich experience the many problems with which we must deal and have clearly indicated the solution to some of them. They have taken the frequently alleged antithesis and demonstrated quite clearly that developments in psychology need not suffer adverse effects under government support. They have pointed out also the problems that arise in the use of consultants, advisory panels and committees, and other procedures for evaluation of contract projects.

It remains now to raise certain other questions about the general topic.

I should like to dwell briefly on what I believe are society's expectations from us as members of the scientific fraternity. It is safe to say, I think, that no science is essentially free from the influences of the culture in which it thrives. Myrdal, in his book entitled *An American Dilemma*, discusses the American Creed—those principles which ought to rule our society—as the cement holding together the heterogeneous and disparate national structure that is America. Against this creed he sets the American reality and points out that the reality often falls short of the creed but that the creed still stands as the “ideological foundation of national morale.” Psychology is perceived by our constituency, I am sure, as a vehicle that will assist in bringing about the American Creed of equality, fair play, and minimal group conflict.

A particular facet of the creed is the high value we place on rationality which is in part defined as “rationalizing” the problems of our society by in-

troducing technological improvements such as those that have grown out of the basic sciences of physics, chemistry, and biology. So great is our veneration for science and technological outcomes that I believe our constituents expect any science to produce its derivative technology. I am sure that the people with whom we deal expect psychology to eventuate in a technology.

To offset these two dominant themes that seem to characterize society's expectations for us, we find that when we attempt to work our miracles with human beings they are ambivalent and somewhat resistant to the changes which we believe our science can produce. Examples of this, of course, come easily to mind in the area of racial problems and in the area of management and administrative structure wherein some of our research findings question the assumed validity of hierarchical structures and present day management or administrative techniques.

I have commented briefly on the perception which I believe society has of us since we cannot escape the influence of that perception as we continue to build our science. Let us turn now, equally briefly, to a consideration of society's down payment for our scientific miracles.

It is difficult, of course, to get an accurate total of the amount of money that is presently being invested in psychological programs. The other speakers have given you some idea of this in describing programs with which they are familiar. In another context, John Eberhart of the United States Public Health Service, has estimated that no less than 40 million dollars has come from the Federal Government to the support of research and training in psychology since the end of World War II. No matter how you seek to arrive at a total of governmental expenditures alone, the amount is staggering and startling to many of us who were brought up in a more rigorous era of financing.

A second example of society's down payment for services yet to come is found in the fact that many psychologists during and after World War II were gladly welcomed, and rendered great service, in various national agencies either as full-time staff

¹ Contribution to a symposium at the Midwestern Psychological Association, April 25, 1952, Cleveland, Ohio.

members or as part-time consultants. There were times, during the war, in Washington when the Pentagon seemed to be housing regional meetings of psychologists, so frequent were their visits to this center of wartime activity. This trend has continued both in the national government and in the councils of private agencies. Psychologists today are well represented in the power centers in which policy decisions are made regarding the nation's scientific and educational endeavor.

Still another example is to be found in the proliferation, since World War II, of private consulting firms of psychologists holding government, industrial, and business contracts. If I remember my history correctly there was no comparable or proportional growth of such consulting firms after World War I. The continued existence of these organizations in a highly competitive field can only mean that sponsors are being satisfied by the services rendered.

In terms of contracts or awards to universities and colleges we see two further illustrations of society's willingness to support American psychology, even prior to a full delivery on society's order. In the first place, contracts are now written for periods longer than one year so that universities and colleges can plan more wisely in establishing and maintaining research staffs on a continuing basis. In the second place, under the general pressures of what might be called the Garrison State of Mind, institutions have been chosen for continuing support in terms of their utility to the government as institutional research facilities to which special research jobs of importance in the defense picture may be assigned.

No one can deny that the developments so briefly sketched above reflect a situation never before known in the field of psychology at least. It is undeniably true that similar developments have taken place within other fields of science, but psychology's unique position in this growth spurt is partially seen in the fact that it attempts to combine within one organizational structure the skills of the scientist as well as the skills of the practitioner. In this regard at least we tend to differ from our colleagues in many of the major fields of scientific activity.

It is pertinent, I believe, to raise questions now regarding the behavior of American psychology under this not too gentle rain of gold. How have we comported ourselves upon being thrust into positions of high social visibility, influence, and power? What might a philosophically inclined outsider say about our behavior as an institutionalized

group? It seems better to raise these unpleasant family questions in discussions such as this, lest they be raised by those whose understanding of what we are trying to do is less well grounded.

First, is it possible that we have oversold ourselves and our product? Can we really deliver what society expects of us or have we merely taken on the job without too much thought of how well the job was to be done? In the necessary efforts to present our case to people untrained and inexperienced in psychology, there have been times when, I think, we have promised more than we can legitimately deliver in terms of our methods, our research substrate, or our constituency's willingness to have its behavior changed.

Second, have we by any chance been guilty of venality in the sense of seeing that certain groups within the total field got certain kinds of contracts to the exclusion of other and possibly equally competent individuals or groups? Is it possible that we have "contract by crony"? If we have any reason to believe that this pattern of contract allocation exists we may well examine our own consciences prior to the time when an elected representative of the people might raise the question of scientific "five percenters."

A third question: Have we built empires within governmental agencies or within our institutions that can be only precariously maintained in the face of a real shortage of well-trained psychologists? We see big research groups housed in universities, with or without tenure provisions, and maintained essentially by contract funds. We see large installations of psychologists built up within the three military services engaged both in the maintenance of research programs and in the supervision of contract research. We see examples of the great difficulty of unifying the psychological research enterprise in terms of wise utilization of manpower. We have all experienced examples of the staff raiding that goes on and we may even have participated in it in an effort to maintain installations of great size. If these empires have outrun our manpower resources, we shall probably be in difficulty in the years ahead. If, as I believe also, from my own experience in one of the military services, the number and quality of research proposals are declining it means that we must wait an indeterminate amount of time until the young men now serving as research assistants are turned out to the field as competent individual investigators.

Another question that might be raised concerns the possibility of unequal development and unequal application within the subfields of psychology. Cer-

tainly not all of our subfields are equally ready to be translated into technologies and it may be that certain of our subfields will never become technologies in the sense of society's usual expectation. It has been pointed out that even the field of comparative psychology is now receiving some contract support. For this, of course, we should be grateful but it still may leave us with the feeling that fundamental research in learning, fundamental research in social psychology, and in certain other areas has lagged because of the great investment in psychometrics, in physiological psychology, and in other fields that have had high priorities.

Another question that we must consider deals with the perception of us by our colleagues in universities and colleges. We have been good producers of overhead income in our own institutions; we have been highly favored by the award of substantial amounts of money; our teaching loads have in many instances been reduced to permit us to carry on research; and in general we have been eating quite high off the hog as a favored discipline in the fraternity of scholars and scientists. I would judge that we are viewed on occasion with envy, on occasion with jealousy, and that we are not infrequently perceived as being somewhat arrogant about our new-found distinction. I would suggest that this is not a situation which in the long run augurs well for the necessary cooperation we must have, particularly from our colleagues in the area of socio-psychological research.

We have also tended to move in the direction of organized research and we have created teams and groups working on applied tasks which may conceivably not be the best way to develop basic science. It has appeared on occasion that we subscribe to the point of view that two heads are better than none in the evolution of new knowledge. It is true that organized research need not involve bureaucratic management but we may be substituting the group and glorifying it at the expense of getting into one cerebrum the wide range of knowledge which may make for creative output. This point has been well made by Charles Dollard a few years ago in his invitational address to the American Sociological Association.

Another question that we might fairly ask as scientists is whether or not we have outrun our synthesizers. So engrossed have we become in completing the job and in getting in the report that our normal publication channels have become heavily clogged and our normal procedures for integrating new research data have been temporarily slowed down. We see this somewhat clearly when

we undertake to do program planning in any given area of psychological research. The program that is broadly sketched out seldom gets well implemented by projects fitted into it after the fact. We had this experience in the Office of Naval Research, as we have tried to indicate in the summary of five years of research entitled *Groups, Leadership and Men*.

Certainly no clear answer can be given to the questions that have been set forth in the previous paragraphs. In many instances the answers involve value judgments, philosophic considerations, or administrative issues which fall well outside the "yes or no" categories that we might find pleasure in using. Yet I believe they are the kinds of questions that should be raised from time to time in the control of our own role as scientists in a particular kind of society.

Like Ado Annie in *Oklahoma* we "cain't say no," and this I suppose is probably a very healthy situation in the sudden development and flowering of any field of endeavor. But it is incumbent upon us to maintain within American psychology the organizational correctives, the individual moral correctives, and the professional correctives which will prevent future difficulties or at least minimize them. Organizationally we can operate through the American Psychological Association in the kind of self-conscious and long-range planning that we seem rather skillful in doing. The moral correctives remain entirely in the realm of our behavior as individuals. The professional correctives again are found in the ethical standards emerging within the American Psychological Association and the attempts of that organization along the lines of state law, certification, and award of diplomas.

It is obvious, I think, that we have moved into a period in our society in which contract support in its many forms is here to stay, whether the funds come from government tax money, industrial grants, or foundation awards. We have earned this kind of support by what has been in the main an able performance as scientists. We still have and will always have, however, the responsibility of using this support well or badly; we must use it in part in terms of society's expectations from us and from other scientists and with as much return as possible for the down payment that society has already made. We must remember that the society which supports us will be the same society to repudiate us if we fail.

THE FIRST COURSE IN PSYCHOLOGY

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OF all the courses in our curriculum, the first course gets the most attention. Still, it is our most unsatisfactory course. It is the course that is usually jealously guarded by the senior faculty member because it is the most important, the most basic course in the curriculum. It is the course which is the most hodgepodge of all our offerings, in which we try to say a little bit about everything, and succeed in completely confusing the students. It is the course which is most disliked and criticized by the undergraduates. It is the course in which the annual enrollment is usually equal to, or greater than, the total enrollment in all of our other courses. It is the course which, according to the impressions gained from discussions with our colleagues in other fields, is not giving their students the background in psychology which our colleagues think they should have. It is the course about which more words have been written than any of our other offerings. It is the course upon which agreement has not been reached as to whether it is primarily for majors or non-majors.

Let us ask ourselves this question. What assumptions do we make in preparing to teach the first course? The basic assumptions of our courses will not be found in college catalogs, but the teachers of first courses with whom I have talked have agreed with the following statement. The basic assumptions of all beginning courses are: (a) the students have no idea as to what the subject is about, and (b) the teacher, from his more learned position, knows what the student should be taught. The first assumption is utterly and completely false. The second assumption, at least in some form, must be made, since it is unreasonable to believe that a beginning student has sufficient knowledge about a field to dictate the contents of his course. *But*, the students do have some pre-

conception of the course. They are not totally ignorant of the subject matters taught in college. They do not appear in our classes on the first day with their minds as totally blank and passively impressionable as Locke's wax tablet. They have some definite ideas as to what psychology, or zoology, or sociology, or history is about. In psychology, however, the problem is particularly acute. The discrepancy between the students' beliefs about the first course in psychology and their teacher's beliefs about its contents is probably much greater than the discrepancy between the students' and teachers' beliefs about the contents of the introductory course in physics. There are too many sources from which students can get ideas about psychology, other than from sources acceptable to us. He gets ideas from his other teachers, his parents, the radio, TV, newspapers, magazines, books, movies, and campus conversations. Our first assumption should read: students have a definite preconception as to what a subject, particularly psychology, is about at the time they enroll in the first course.

The second assumption, although it does not require extensive modification, does demand some qualification. It is a valid assumption, but a question might be raised as to whether or not the teacher organizes the first course on the basis of *all* his knowledge. More than likely, the first course is built around his knowledge of the contents of a particular textbook and of the first course that he taught as a graduate assistant. Rather than teaching a particular content in the first course because it is the content taught at other schools in other places and at other times, we should pause to examine, more critically, the purpose of the first course.

Basically the whole undergraduate psychology department, as implied by Principle 6.16-3 of our code of ethics (1), is nothing more than a service department. The opportunities for professional employment with only the bachelor's degree are practically nonexistent. The obligation of the undergraduate department to its majors, then, is to

¹ On leave, 1951-52, at the University of Oklahoma on faculty fellowship granted by the Fund for the Advancement of Education. This publication represents the independent work of the author, however, and he is solely responsible for it.

provide them with the background necessary for expeditious and profitable study at the graduate level. Thus, the undergraduate department is a service department for the graduate schools. Likewise, the first course must perform the similar function at the undergraduate level. It must prepare the students for the courses to come. Thus, the first course is, wholly and completely, a service course. It must perform a service function for other undergraduate departments, for psychology graduate departments, for other courses in our own department, and for the students enrolled.

From this, certain basic considerations of the first course follow. What do the students enrolling in the first course expect it to be? What do our colleagues in other departments expect psychology to give to their majors? What do graduate departments expect the background of their students to be? And allied to these problems is the question: How adequately do our present first courses take cognizance of these expectations?

What do the students enrolling in the first course expect psychology to be? The importance of asking such a question should be apparent to all psychologists. We are all familiar with experiments that demonstrate the distorting effects of set, attitude, value, wants, and needs on perception and learning. This is the reason that intelligence about the enemy is recognized as being vitally important to any propaganda program. The necessity of having intelligence about his students is just as critical for the teacher. In teaching any course we must consider how the material presented is likely to be perceived by our students, but in teaching the first course, since the students lack the common background of previous psychology courses, the problem is particularly acute. We cannot continue to teach on the assumption that our students know nothing about psychology. The first thing that we usually do when one of our advanced students comes to us for help, for example, in handling a statistical problem, is to ask him, in order to discover what instruction he needs, what he thinks the solution to the problem is. The situation is the same in the case of the first course. The first step in designing the course is to find out what the students think psychology is. This does not mean that their expectations should be the contents of the course, no more than intelligence about the enemy means that our propaganda should reinforce the enemy's current beliefs. Intelligence

merely specifies our starting point and describes the framework in which our teachings will be perceived.

The results of an attempt to obtain such intelligence is shown in Table 1. These results were obtained from a content analysis of papers assigned at the first class meeting of the elementary class in January, 1952 at the University of Oklahoma. The assignment, completed by 150 students (composed of 35 per cent second-semester freshmen, 40 per cent sophomores, 17 per cent juniors, and 8 per cent seniors), was to write 200-500 words on the questions: "What do you think psychology is about? What do you expect to hear about in this course?" The papers were then analyzed in terms of (a) the *value* the students placed in the course, i.e., why they enrolled in the course, (b) the *point of view* they held toward the course, as indicated by statements regarding the work of psychologists and how psychology could be used, and (c) the *content*, or subject matter, of psychology.

Some explanation should be given for the categories under these headings. The first category under Value of psychology is To increase income.

TABLE 1

Percentages of statements indicating students' expectations of the first course

Categories	%
Value of psychology	
To increase income	1.9
To get along better with others	48.1
Curiosity	50.0
Point of view toward psychology	
Applied	35.7
Clinical	19.5
Social	12.1
Scientific	32.7
Content of psychology	
Mind	12.2
Behavior	13.2
Reaction	5.2
Motivation	20.1
Emotion	4.1
Perception	1.2
Learning	3.7
Thought	6.2
Personality	5.0
Developmental	13.3
Mental disorders	12.9
Business	0.9
Sensational	1.1
Systematic	0.8

This category includes all those statements indicating that the student is taking the course with the intent of obtaining knowledge that will be useful to him in acquiring material riches. The second category, To get along better with others, includes those statements indicating that the student hopes to obtain knowledge that will help him to understand the actions of others, that will help him in influencing the actions of others, and, in general, that will permit him to acquire a higher status within his group. The third category, Curiosity, includes statements indicating that the student hopes to learn "what makes him tick," what are some of the fascinating facts that the psychologist studies, what does the psychologist do, and, occasionally, what is the relation of psychology to other disciplines.

Under the heading Point of View there are four categories—Applied, Clinical, Social, Scientific. Applied includes statements indicating that the student considers psychology to be useful in such fields as business, industry, and advertising, i.e., useful in areas other than Clinical and Social. Clinical includes statements indicating that psychology is considered to be concerned with the diagnosis or description of personality, and with the treatment of behavior disorders. Social includes statements indicating that psychology is conceived as using its principles in the control of group behavior, principally, according to the students, in prescribing the requirements of the "good life" for adolescent and childhood social groups. Scientific includes statements indicating that psychology is conceived as being an independent science, although "not quite the same as physics," requiring experimentation upon which theories are based, and possessing a history. All of the statements indicating a scientific point of view, however, were followed by a utilitarian statement. In other words, psychology was scientific, but it was a science that was used in either a social, clinical, or applied fashion.

For the most part, the categories under Content are self-explanatory. Mind includes those statements using this word, along with those statements mentioning consciousness or unconsciousness, and a few statements indicating an expectation of hearing about the effects of the mind upon the body. Behavior includes all those statements saying that psychology is the study of behavior or action. Reaction was given a special category since it seemed to have a different meaning from behavior. Reaction,

for the students, meant reactions of the mind—apparently, the body acts, but the mind reacts. Motivation, Emotion, Perception, Learning, and Thought have the usual psychological definitions. These categories include statements in which these words, or special cases of these words (e.g., idea or imagination as special cases of thought) were used, and, under Motivation, statements indicating a concern with "why" behavior occurs. Developmental includes those statements referring to expected discussions of the development of the human through childhood and adolescence, of the effects of heredity and environment on this development, and of the relation of the nervous system to the functioning of the organism. Personality includes statements indicating a concern with people, their abilities, their nature, and intelligence. Mental Disorders includes all of those statements indicating that the students expect to hear about testing, vocational and personal counseling, psychodiagnostics, psychotherapy, psychoanalysis, and psychiatry. Business includes statements about the use of psychology in selling, advertising, and personnel selection. Sensational is the category that includes statements about psychology being concerned with dream analysis, hypnotism, mind reading, and ESP. The Systematic category consists of statements indicating that the students expect to hear about the various fields of psychology, the history of psychology, research methods, and statistics.

These categories include all of the statements of content that were made. The omission of any statement indicating the expected content of psychology to be leadership, morale, propaganda, or any of the other topics of social psychology was quite surprising. On the other hand, the few references to sensational topics and the frequent mention of psychology as a science was quite gratifying. Most significant, I believe, is the frequency with which Motivation was mentioned as the expected content of psychology. To the student, this is the topic he most wants to hear about. Yet, according to Wolfe's analysis (4), only 8% of the "average" textbook is given over to this topic. Again, we do not have to blindly follow the students' demands, but this interest could be used to advantage in the planning of our first course.

Summarizing Table 1, we see that (a) the student enrolls in the first course to find out more about himself and those with whom he lives, so that he may get along better with his neighbors;

(b) he considers psychology to be a science that he wants to be able to use; and (c) he expects psychology to consist, in general, of a study of mind and behavior, and, in particular, of the "why" of man's behavior, of how man develops, and the kinds and treatment of mental disorders. This, then, is our "propaganda man" with which we start.

The remaining questions are concerned with problems of policy. What are the objectives of our first course? A complete set of objectives for all colleges and universities cannot be prescribed. A characteristic of American education is that the broad educational objectives of various schools differ, to some extent, one from the other. The precise objectives of the first course at different schools must be determined by the faculty of that school. However, after considering the following questions, some guides to aid in defining these objectives can be presented.

What do our colleagues in other departments expect psychology to give to their majors? These statements necessarily come from men who feel that psychology has something to contribute to their field. During the war, engineers and psychologists collaborated profitably on many technical devices, particularly in the areas of communication and instrumentation. Advertisers have inquired about problems of display, both visual and auditory. Architects have occasionally asked about problems of lighting and color. We might conclude from the wealth of available, although incidental, observations that the physical scientist, particularly the applied physical scientist, would like his students to learn about perception. The business management faculty, as indicated by their course requirements in psychology, have shown an interest in having their students learn about the problems of personnel selection and placement, an area that might be considered, broadly, under the topic of personality. The educators seem to be interested, in addition to personality, in the application of the fundamental principles of learning. In the postwar era, by far the most vociferous group has been the social scientist. In the past year I have heard the demands of social scientists from a small Midwestern liberal arts college and from a large Southwestern state university expressed on two different panel discussions. These demands, from political scientists, economists, and sociologists, were for teaching their students (and, incidentally, themselves, too) why particular leaders were chosen,

why particular mass movements developed, why man behaves as he does in various situations. In short, the social scientist asked us to teach their students about motivation. Surveying the wants of our colleagues indicates that they want us to teach their students something about perception, learning, motivation, and personality which, and this is an important qualification, can be *used* by the students in their major areas. This qualification does not mean that the course must be taught at a superficial level. It can be taught as a course with fundamental contents, but our colleagues ask that we indicate to the students how these fundamentals may be used in other fields.

What do graduate departments expect the background of their students to be? Stoke's (3) paper provides an indication of the answer to this question, even though his survey is restricted to the graduate departments of nine Eastern schools. He concludes that, regardless of the student's principal interest within the field of psychology, mathematics and natural science are urgently recommended (for showing the student "what science is" and "how to think"), training in the social sciences is not particularly urgent, and in psychology the most advantageous background is one of statistics, of knowledge of systems or a system, and experimental. This background, of course, is not going to be provided by the first course, but the first course must provide the background for the courses which, in turn, will provide the background for graduate work. These requirements imply that the first course should indicate to the student the necessity for understanding scientific methodology and the use of experimental tools, and for acquiring a systematic framework within which to view psychology. The graduate school demands, thus, seem to require that the first course pave the way for later courses in experimental and history or systematic.

How adequately do our present first courses take cognizance of these expectations? Briefly, the answer is: Not very well! On the basis of Wolfe's analysis (4) of elementary textbooks, less than 10 per cent of the "average" textbook presents, as defined here, an Applied or Social point of view, whereas approximately 20 per cent of the "average" text presents a Clinical point of view, and 60 per cent presents a Scientific point of view. Maybe this is the relative emphasis which should be given to these points of view in the first course, but in

view of the demands of our colleagues from other fields, and of the great number of psychologists indicating an interest in social psychology, it seems quite likely that the students are being given a very distorted view of contemporary psychology. The relative emphasis given to the different points of view by the "average" text was probably a good description of psychology in 1902, but that was 50 years ago, and our students today deserve a picture of contemporary psychology—not of psychology in its adolescence. When Wolfie's data are analyzed according to Content, discrepancies between students' expectations and textbook content are again found. The textbooks devote 42 per cent of their pages to Personality, Developmental, and Mental Disorders, as against the students' expectation of 26 per cent of the course being devoted to the topics. The textbooks devote 35 per cent of their pages to Emotion, Learning, and Perception as against the students' expectation of 9 per cent. The students expect 20 per cent of the course to be devoted to Motivation, and the textbooks give it 8 per cent. Thought gets about the same attention (8 per cent) as the students expect (6.2 per cent). Mind, Behavior, and Reaction receive no specific textbook attention, although these general topics are presumably discussed in the Introduction (4 per cent) and scattered throughout the text, while the students expect about 31 per cent of the course to deal with these topics. The remaining 3 per cent of the textbooks and of the expected course content are taken up with Business, Systematic, and Sensational, although the textbooks avoid the last topic. Again, maybe this textbook emphasis is right, but it seems questionable. As a service course we should pay heed to the demands of our colleagues, which call for more Motivation and less Mental Disorders. As a service department we should pay heed to the demands of the graduate schools, which call for more, much more, Systematic content. As psychologists we should pay heed to our code of ethics which implies that, at the undergraduate level, we should not attempt to produce, in fact cannot produce, professional psychologists—an implication that calls for less emphasis on Mental Disorders.

The belief that the first course is not doing its proper job was also expressed by Pressey in his 1948 presidential address to the Division on the Teaching of Psychology (2). He believed that psychology should be a basic prerequisite for the

social sciences and an essential part of a general education program. The particular contribution that psychology can make in these areas, he said, is to aid the student in the better understanding of himself. Students take psychology in order to get this understanding, yet they are not getting it. Pressey's thesis is that psychology is neglecting to provide its proper service in undergraduate programs. Since psychology, at the undergraduate level, is nothing more than a service department, it is obliged to provide the students, the other departments, and the graduate schools with the services expected by them. Although undoubtedly we are providing some of these services, particularly to the graduate schools, we are just as certainly not providing all of the services which we should or could provide.

To correct these shortcomings what must be the features of the first course? Since, in a very real sense, the first course should *prepare* the student to study psychology, rather than equipping him with a storehouse of psychological facts, it might be considered, more legitimately, as an introductory, rather than an elementary, psychology. Although, as was previously pointed out, the details of this introductory course will necessarily vary from one school to the next, certain features will be constant. These features will be those which are compatible with the guides that have been provided by our students, by our colleagues, and by our graduate departments. These guides, along with their sources and a possible means of following each of the guides sifted from the preceding considerations, are presented below.

1. The content of the course must be presented in such a manner that the students can see how they may apply it in their own lives, both professional and otherwise. (Students, Colleagues.) This might be done through the frequent use of nonexperimental examples, readings outside of the professional field of psychology, group discussions, and properly prepared test questions. In order to take advantage of our intelligence about the students, the course could begin with the exposure of psychological fallacies, thus bringing in some discussion of psychology in use, and at the same time contributing to the satisfaction of guide 2.

2. The desirability of following the principles of scientific methodology in the consideration of problems must be continually demonstrated. (Stu-

dents, Graduate Departments.) In addition to our present practice of supporting our statements with experimental reports, this guide could also be emphasized by exposing everyday psychological fallacies, such as fortune telling, character analysis, and old adages.

3. The content of the course should consist of the fundamental principles of motivation and emotion, perceiving, thinking, and the development of the psychological human organism. (Students, Colleagues.) This implies that the first course should avoid the more specialized discussions of such fields as differential psychology, personnel selection, physiology of the nervous system, receptor sensitivity, and work and efficiency. Not that all mention of these problems should be avoided, but we should merely hint at them. The wealth of material with which the psychologist is concerned is too great even to attempt to present meaningfully and coherently in a single year, much less in a single semester. The beginning student should learn the basic facts, should learn of the multiple implications and applications of these facts, and should learn of the necessity for, and should come to want, further study of the more particularized topics. This guide might be followed by pointing out to the students, when discussing some principle, where the psychologist who makes explicit use of this principle is employed. The students might also be asked to observe various jobs and see what psychological principles they can discover in evidence there.

4. The contents of the course must be presented in a cohesive, interrelated fashion. (Students, Graduate Departments.) Such a presentation would provide the students with a characterization (and a hoped-for understanding) of personality and with a systematic framework for psychology. Presentation of the material in this way is in distinct opposition to the now prevalent shotgun pattern of the first course. Today, there is too little re-

lation between Chapter 7 (lectures 18, 19, 20) and Chapter 8 (lectures 21, 22, 23). If a test were given after lecture 20, what relation there might be is erased by including the two chapters in separate tests. This guide, of course, is one of the more difficult ones to follow in any course, but it might be met to some extent by frequently considering behavioral acts, rather than single aspects of an act. Recent experiments in perception provide good demonstrations, preferably by way of student participation in classroom or laboratory demonstrations, of the interdependency of motivation, perceiving, and thinking. Many other equally good demonstrations can be found in studies of learning, problem solving, and social behavior. Again, properly prepared tests can be used advantageously.

These four guides are not intended to be complete. They must be supplemented at each individual school and adjusted to fit the resources of each individual teacher. They do meet the main demands of those groups who expect, and rightly so, some service from undergraduate psychology courses. They do meet, at least to some extent, the criticisms that have been leveled at the course. At the same time, the resulting course does not require unethical popularization. It can be a sound course.

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Status of Psychologists under the Old-Age and Survivors Insurance Program¹

Self-employed professional psychologists, as well as many other self-employed professional people, are among the nearly 5 million self-employed people who were brought under old-age and survivors insurance beginning January 1, 1951. The covered 5 million include all people in self-employment except those whose net earnings from self-employment are less than \$400 a year, those whose income is derived from agricultural enterprises, and those whose income is derived from the practice of professions specified in the law.

The self-employed professional groups specifically excluded from old-age and survivors insurance protection are lawyers, physicians, dentists, osteopaths, chiropractors, naturopaths, Christian Science practitioners, optometrists, veterinarians, professional engineers, architects, funeral directors, and certified, registered, licensed, or full-time practicing public accountants. In considering the exclusion of professional groups, the Congress had made it clear that it would attempt to comply with what it believed were the wishes of the particular group. Although there seems little reason to believe that Congress was in any way judging the professional status of a group, some groups apparently felt that to be omitted from the list of excluded professions might cast some doubt on their professional status and therefore decided to forego old-age and survivors insurance protection.

It is interesting to note that many individual members of the excluded professions have since requested coverage under old-age and survivors insurance. Of greater significance, perhaps, is that representatives of the national organizations of several of the excluded groups have indicated that if coverage under the program were offered to their professions at this time there would be favorable reception.

Those psychologists who have been covered by Federal old-age and survivors insurance in the past, those who have reported wages and reported contributions for their employees, and those who have seen it work in alleviating financial difficulty among old people or in fatherless homes, understand, in general, how the program operates. Its objective is to provide a partial replacement of the income lost by a worker upon retirement or by a family when the breadwinner dies. Through contributions based on wages and earnings from self-employment, gainfully employed people establish rights to future benefits related to their earnings.

¹ This statement was prepared at the request of the *American Psychologist*.—Ed.

Benefits are paid as a matter of right without investigation of needs. Benefit amounts are related to the insured worker's average earnings in covered employment. Monthly retirement benefits are payable to insured retired workers at age 65, and their families. Monthly survivors benefits (and an initial lump-sum payment) are paid to the widows and orphans, dependent widowers, or dependent parents of deceased insured workers.

The extension of old-age and survivors insurance to the self-employed not only provides insurance protection for self-employed professional psychologists and their families but, in addition, tends to increase the protection afforded some psychologists who normally work as employees. Before the self-employed were brought under social security, psychologists who worked as employees received old-age and survivors insurance credits only for wages received for services performed in employment covered by the program; remuneration received for services not in connection with covered positions, such as fees for consultations, honorariums, royalties from textbooks, etc., were not creditable to their social security accounts. These types of remuneration may now be counted as self-employment earnings. Thus, persons whose wages are less than the maximum creditable for old-age and survivors insurance purposes (\$3,600 per year beginning with 1951) but who also have remuneration for self-employment activity are now able to receive protection more commensurate to their total earnings. Old-age and survivors insurance coverage for the self-employed also benefits psychologists who had some coverage as employees but who later became self-employed. Many of these people either would have lost their old-age and survivors insurance protection entirely or they and their families would have qualified for reduced benefits.

The basis for the self-employed psychologist's social security coverage, like that of other covered self-employed people, is the amount of his "net earnings from self-employment." In general, this is his net profit from his trade or business as computed for income-tax purposes. As indicated above, it includes royalties from textbooks, fees for consulting and lecturing, honorariums, and similar remuneration received from the individual's trade or business. During taxable years in which an individual's net earnings from self-employment are less than \$400, he is not covered by old-age and survivors insurance. A psychologist who regularly works as a covered employee may, as a result of royalties, fees, and honorariums, also be subject to the provisions of law covering self-employment if his net earn-

ings are at least \$400. When his net earnings in combination with his covered wages as an employee exceed \$3,600 in a taxable year his self-employment income is reduced to an amount equal to \$3,600 less his covered wages.

The Social Security Act Amendments of 1950 not only extended coverage to the self-employed and many other persons not previously covered under the program, but also made many improvements in the insurance program. In order to assure that the newly covered people would not be at a disadvantage under old-age and survivors insurance by reason of their late entry into the system, the amended law provided a "new start" for determining both eligibility for benefits and the benefit amounts. Generally speaking, an individual who works in covered employment approximately one-half the time after 1950 and before he reaches age 65 will meet the eligibility requirements for benefit payments. At least 6 quarters of coverage are required in every case but never more than 40 (ten years of covered self-employment). Under the "new start" formula, contained in the 1950 amendments, benefits are based on earnings averaged over the period beginning with 1951 and ending when the individual reaches 65 or retires at a more advanced age.

Benefit payments under old-age and survivors insurance, although substantially increased by the Social Security Act Amendments of 1950, were again increased by the Social Security Act Amendments of 1952. Under the 1950 amendments, monthly old-age insurance benefits for retired workers ranged from \$20 to \$80; for an aged couple, from \$30 to \$120. The maximum family benefit was \$150 a month.

Under the Social Security Act Amendments of 1952, individuals receiving benefits based on earnings from 1937 on (who constitute almost the entire beneficiary roll at this time) will have their benefits increased at least 12½ per cent, subject to certain maximum provisions applying to the larger families. The amount of benefits payable to the retired insured worker, or the amount on which benefits of dependents and survivors are based, is increased by \$5 or 12½ per cent whichever is greater. For the retired workers the increases range from \$5 to \$8.60 and average about \$6.

Beneficiaries whose benefits will be based on earnings after 1950, including practically all newly covered wage earners and self-employed people, will have their benefit amounts computed under the revised benefit formula provided in the recent legislation. The formula will be 55 per cent of the first \$100 of average monthly wage and 15 per cent of the next \$200. This formula results in an increase of \$5 for the retired worker whose average monthly wage is \$100 and over with smaller increases where the average monthly wage is below \$100. A retired worker with an average monthly wage of \$200

under the present law will receive a monthly benefit of \$70; a retired worker and his wife will receive a benefit of \$105. Survivor benefits payable on the account of a deceased insured worker whose average monthly wage was \$200 will be as follows: Widow and one child, \$105, widow and two children, \$140.10, and payments to a widow and three children will equal \$160.20. The minimum benefit amount for a retired worker is raised to \$25 and the maximum amount payable to a family is increased to \$168.75. However, the provision that total family benefits cannot exceed 80 per cent of the average monthly wage is retained.

The increase in benefit amounts was necessary because of the rapid rise in wages and prices during the past few years. Adjustment of the program to keep its provisions in line with major changes and economic conditions is of great personal significance to nearly all Americans. Some psychologists are no doubt already receiving retirement benefits based on their self-employment income. Many others can now take into account the protection afforded by Federal old-age and survivors insurance as a basis for planning their personal and family security.

O. C. POGGE, *Director*

*Bureau of Old-Age and Survivors Insurance
Federal Security Agency*

Admission Policies of Schools of Social Work

In a letter to the editor ("Psychologists' Ignorance of Social Work." *American Psychologist*, December, 1951) Joseph Andriola stated that he was "desirous of seeing an increase in the interchange of information between social workers and psychologists." He also noted with pride that social work schools required courses in both undergraduate and graduate work in psychology. However, he was disturbed to find that there was "little evidence among psychology students or psychologists which would indicate even a minimal elementary knowledge of the field of social work."

We can restate Andriola's impressions to the effect that the social workers' communication line to psychology is open and operating effectively, but the psychologists' communication line to social work is either not open or not operating effectively. If the line is not open, then psychologists are hindered from gaining a knowledge of social work. One way the line can be considered to be open is by examining the admissions policy of the social work school to find out whether psychologists or graduate students in psychology are permitted to enroll in courses in social work. If the admissions policy of the school of social work is formulated so that psychologists can not enroll, then we can conclude that the communication line is closed. We think that the school of social work has raised a

barrier to cross communication. We may shed some light on the way this barrier was constructed by relating the experience one graduate student in psychology recently had with a school of social work:

A teaching fellow in psychology at the university is also a part-time counselor at a well-known institution for disturbed children. Besides his academic work beyond the master's degree level, he has had approximately eight years of part-time work in various social work agencies and camps.

Recently this student enrolled in a course in child welfare which was taught by the director of the institution for disturbed children. The director welcomed him into the class and the faculty member in charge of the child welfare program consented to let him take the course. But the school's director of admissions successfully protested his enrollment on the basis of the school's admission policy. In her letter stating the reason, she wrote, in part: "Because of the particular nature of the program of professional training in this School, our courses have never been open to admission of staff members of other Schools of our University."

This student's experience reflects on the admission policy of only one school of social work, and, consequently, may not be representative. If a research study of a representative sample of admission policies of schools of social work shows that their admission policies block psychologists from enrolling in courses, then we can generalize that the schools of social work have set up a barrier to cross communication. We would like to see this study made. Some of the questions we would want to have answered are the following: (a) What is the policy toward part-time enrollment? That is, can psychologists enroll for one or two courses they want? Or does the admission policy permit only full-time students to enroll in courses? (b) Does the school encourage psychologists to enroll in courses? What courses have been organized which would serve the purpose of giving training and fostering interrelationships between psychologists and social workers?

Of course, we recognize that the schools of social work have formulated their policies to serve their particular needs. Their policies may be necessary to serve their objectives. Our purpose has been to show that the closed door policy is a barrier to cross-communication.

We think that most psychologists and social workers would agree that the time and place to establish inter-professional relationships is at the graduate level. Each group could begin at this time to understand and appreciate the contributions made by the other profession. The effect of an interrelated program at the graduate level would be to increase the cross-communication in professional activities. We could formulate this hy-

pothesis: if cross-communication is increased at the graduate level (probably by having students take courses in both schools), then there will be an increase in the interchange of information in professional work. An important outcome of a graduate training program which would require students in psychology and social work to take courses in each department would probably be a more effective team approach to the common problem to be solved by both groups, viz., to enable the client to live a happier and more satisfactory life.

HARRY SINGER

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Mr. Singer's comment reveals one of several important problems which illustrate the importance to psychology of close and effective cooperation with the social work profession. The American Psychological Association, through its Committee on Relations with the Social Work Profession is dealing with these problems. At the present time the committee is in active contact with the American Association of Social Workers and the American Association of Psychiatric Social Workers.

APA COMMITTEE ON RELATIONS WITH THE
SOCIAL WORK PROFESSION

Responsibility for Failing Students

In line with our current interest in the development of an adequate program for the training of professional psychologists, and especially as professional psychologists, I would like to call attention to an aspect of the program that has been ignored. We are quite concerned about entrance requirements, training content, methods, and quality, and how and where the psychologist finally applies his training. What about those who fail to complete the program?

It seems to me that the training institutions have some responsibility toward these students. This responsibility should be manifested in two specific ways. First, after a first failure a serious inquiry should be made into the reasons and the student given assistance in correcting the difficulty. This is in line with our current trend toward recognizing the student as a person under stress and working toward minimizing this stress and maximizing security. This assistance might take the form of encouraging the student to take special courses or tutoring in areas of deficit and/or making available to the student personal counseling. Second, if the student fails the second time, the training institution should recognize that either it made an error in judgment and the student is incapable of performing the tasks, or that the student is still faced with the academic and/or personal deficits that contributed to his failure in the test situation. In either

case he is badly in need of some sort of assistance to help fit himself into the scheme of things.

I believe that an examination of current practice will reveal that the training institutions tend to turn their backs upon the failures and completely isolate them. It is my contention that the training institutions are completely ignoring an area in which they have a great responsibility, and that a definition and recognition of this responsibility is an integral part of the development of an adequate professional training program in psychology.

(Name withheld at author's request)

The Nomothetic-Idiographic Dichotomy

In his article titled "Clinical Psychology—Science or Superstition," Dr. W. A. Hunt neglects the most crucial criticisms of the nomothetic-idiographic dichotomy. As usually maintained, the dichotomy seems to rest upon two basic misconceptions: (a) that only *some* concrete-particular occurrences or things are unique and that by virtue of this uniqueness they resist the standardized modes of natural or scientific understanding, requiring instead direct intuition or empathetic rapport; and (b) that while all occurrences or things have an infinitude of aspects or an infinite array of actual and possible involvements, an understanding of at least some occurrences or things requires a sort of reduplication of the object in all its concrete fullness, i.e., the object cannot be understood unless all of its ramified details can be grasped or accounted for. Neither of these assumptions is correct. If either is implied in the dichotomy under examination, then the dichotomy is untenable.

If by "uniqueness" is meant "different from all other concrete-particulars in at least one respect," it is clear that such occurrences or things cannot be identical. No one wishes to argue that a unique physical occurrence like the falling of a stone requires special intuition to be understood. So far as human behavior and personality are regarded as natural phenomena, their uniqueness cannot be so fundamentally different in kind as to require wholly disparate methodological principles or treatment.

Scientific inquiry is always concerned with resolving specific problems. This usually consists in determining the reasons and conditions for anything being of a certain *kind* or *class* or possessing certain properties. Singular cases are scientifically significant only if they can be shown to be instances of general principles or

members of abstract classes. The kind of principle or class involved in accounting for single cases is largely determined by the problem at issue. In a word, scientists *always* ask why *P* is *Q* (where *Q* is a general concept) and never just why is *P*, either in general or in all its infinite details and bearings.

Since (a) "to understand" or "to render intelligible" means "to be able to explain," and (b) *all* scientific explanation consists in deducing conclusions from universal principles combined with statements of fact or other (lower level) principles, then (c) the understanding of particular or single cases is not essentially (formally) different from an understanding of invariant patterns, regularities, or empirical laws. The most important difference is that at least one other law of greater generality must be incorporated in the argument to explain a law.

Are invariant patterns or regularities present in behavior and personality? If so, can they be known? If the question is answered negatively, the following two absurd conclusions follow. (a) Presumably, sciences are concerned with exhibiting the regularities of nature by formulating universal laws or principles which express invariant relations. Therefore, if the subject-matter of psychology lacked any regularities, it would have been impossible for the science of psychology to develop; unless there were many varieties of regularity, it would have been impossible for psychology to progress significantly. (b) In order for social groups to exist and for social or interpersonal action to occur, people must understand one another since only thus could grounded anticipations occur and influence conduct. If (a) understanding of people or social situations required reference to the infinitude of aspects comprising their concrete fullness, or if (b) no regularities in behavior or personality could be known and discerned, it would be impossible for social groups or action to occur.

If the subsidiary assumptions are true, then since the consequences of the above arguments are absurd, the major query posed—viz., whether behavior and personality exhibit knowable regularities—must be answered affirmatively. Accordingly, we are justified in concluding that no clinician need suffer "nihilistic despair" because of the so-called "idiographic dilemma," unless he fails to cope competently with certain elementary methodological considerations.

ARTHUR GINSBERG
New York University

Across the Secretary's Desk

There are many things that pass across the Executive Secretary's desk without his doing—or needing to do—anything about them. When these things come in literal form and concern many APA members, it seems appropriate to print them in this space. This month, two members of the Central Office staff, Jane Hildreth and George Albee, have timely things to say about APA affairs. They say them herewith.

FILLMORE H. SANFORD

New Procedures for Associate Applicants

At its September 1952 meeting the Council of Representatives approved the recommendation of the Board of Directors that the application blank for Associate membership be revised to require the applicant to list a number of psychologists who know him well, that the Central Office solicit the endorsements directly from the endorsers, and that a fee of \$2.00 be collected from the applicant to apply toward the cost of the application process. The Membership Committee and Central Office staff have developed the necessary new forms and have worked out the rather intricate administrative procedures required by the change. The purpose here is to inform members of the new procedures and to show the need for them.

First the need. At the present time around 1,700 people a year are applying for Associate membership in the APA. Of these 1,700, around 1,400 complete their applications by the deadline date. Of these 1,400, all but about 300 are so clearly eligible that the decision by the Membership Committee is a relatively easy and quick one. They more than meet the educational and experience requirements, they are well endorsed by APA members who really know them. About one-third of the 300 that are not clearly eligible are so clearly *ineligible* that decisions are also easy. It is quite clear, incidentally, that in the majority of these "clearly ineligible" cases the applicant either misunderstood our requirements or was misinformed concerning the nature of our organization. The fact that such applicants are frequently endorsed "without reservation" is saddening to all of us, but perhaps this is one of the prices we pay for our bigness.

The arithmetical remainder resulting from the figures in the previous paragraph runs around 200. Psychologically, however, these 200 "problems" seem closer to 2,000. Processing of their applications takes almost more time than all of the 1,500 "clear" cases, and the Membership Committee and Board of Directors are never entirely satisfied with all of the final decisions that are made. These latest procedural changes represent a further attempt to increase the amount of available information upon which decisions can be based. We never know ahead of time who will be a problem case; therefore procedures have to be the same for all applicants.

In accordance with the Council action, a new application blank has been developed. In general appearance it resembles the form used this past year, and the applicant is asked to provide the same kind of information about his educational and experience background. The endorsement section, however, is very different. Only one copy of the blank is filled out by the applicant. In the endorsement section he is asked to list the names and current addresses of at least *three*, and preferably *five*, APA members who are familiar with his training and/or employment situation. The Central Office will then send a special evaluation form to at least two of the references, and frequently to more than two. A brief summary of the applicant's educational and employment history will be typed on the form, and each of the persons will be asked how long he has known the applicant, in what capacity, whether he knows of any evidence of unethical conduct, and whether he wishes to endorse the applicant for membership.

In listing persons as references, the applicant is asked to include at least one who is familiar with his graduate training, and when appropriate, at least one who is familiar with his immediate employment situation. Ordinarily about 50% of our applicants apply under Requirement Category 2 (two years of graduate study), 35% under Category 3 (a year of graduate study plus a year of experience), 13% under Category 1 (doctor's degree based upon a psychological dissertation), and 2% under Category 4 (distinguished member of an allied field). As one might expect, it is the Cate-

gory 3 applicants who make up the largest percentage of the cases that turn out to be problems. Previous analyses of applications (February and December 1950 Secretary's Desk, *Amer. Psychologist*) indicate that Category 3 people are more likely to have obtained their "year of graduate study" outside of a formal department of psychology, more likely to have taken courses at several universities rather than at one, less likely to have taken what are talked about as "core" courses in psychology. With a list of references from which to choose, the Membership Committee can select those whose knowledge of the applicant will best answer the Committee's questions.

A further benefit from these new procedures is that the emphasis has been shifted from endorsement to evaluation. The blank that will be sent to the references is called "Evaluation of Application for Election as an Associate." The last question asked of the Evaluator is: "Do you wish to endorse this applicant for membership?" If he says "Yes," then he is asked to indicate whether his endorsement is with or without reservations. Blanks used in the past have always assumed endorsement—with or without reservations—and many endorsers were bothered by having to do something as positive-sounding as *endorse*, yet with reservations. Just what is a reserved endorsement? Sometimes endorsers check "with reservation" because, although they know nothing against the applicant, they have known him personally only a brief time. Sometimes they check it because they are not sure how the Membership Committee and the Board interpret the educational or experience requirements. And sometimes, though rarely, they check it because they have serious reservations about the applicant's readiness for membership on ethical grounds. In other words, in this last case, the "endorser" really is saying he doesn't *want* to endorse the candidate's application in any way, not even with reservations. An all too frequent solution to this dilemma has been for the endorser to fail to send in the application blank. The candidate's file is then incomplete, and a decision on his membership delayed for at least another year, sometimes longer, with embarrassment to all concerned when the reason for the incompleteness comes to light. We hope the new procedures will solve the problem of the "endorser" who doesn't want to endorse. He can evaluate, but he doesn't have to endorse. If from a list of three to five references

we fail to get at least two endorsements, then it is quite clear that the applicant is not yet ready for membership, even as a problem case.

It can be seen from the foregoing that the clerical side of processing Associate applications will increase considerably under the new procedure. The applicant fills out only one blank, but the Central Office will have to send the evaluation blanks out to the references, following up when necessary. This task is in addition to the many routine checks that have to be made whenever an application comes in. Before an applicant is considered to be a "new" one, his name is first checked against our file of incomplete applicants, then against the file of former applicants, then against former members, then against "possible" applicants (this file contains letters and accompanying material from people who write in asking for blanks or for information about membership), and finally against our "Quacks and Suspicious Characters" file. His application is also checked for his signature (many applicants forget to sign, and Council voted in 1951 that all applicants have to sign a pledge supporting the purposes of the Association), as well as the APA membership status of the people whom he lists as references (applicants sometimes list non-APA references).

The Board of Directors and the Council of Representatives voted to charge a \$2.00 application fee to help take care of the expense involved in processing the application. This fee will not be returned, nor can it be applied toward dues for those elected. A rejected applicant who has once paid his \$2.00 will not be asked to pay another \$2.00 when he re-applies.

The Membership Committee devoted considerable time and thought to the problem of what to do about the applications now in Central Office—some of them complete but received after this year's deadline, most of them at various stages of incompleteness. Everyone felt, quite rightly, that the less retroactive the decision the better. Many of these applicants had already had to submit a second set of application blanks, because they had used forms made out of date by the 1951 Council decision to require applicants to sign a pledge supporting our purposes and to require endorsers to sign a statement concerning the applicant's ethical conduct. In spite of all the publicity given to the 1951 Council action, both in the *American Psychologist* and in letters to universities and employ-

ers of large groups of psychologists, applications are still coming in on what we call the "old" forms—forms that do not contain the so-called ethics questions. In every such case, the applicant has been, and will continue to be, asked to re-submit his application on the proper forms. But what of the almost 200 people who have their applications in now on the form that was proper until September 2, 1952? Most of these 200 came in during the month of August, after this year's application deadline but before Council took its action changing procedures. Immediately after the meeting we sent letters to the universities and employers telling them to stop handing out or endorsing applications until the new forms and procedures were ready. The October issue of this journal carried a prominent announcement concerning the moratorium on applications. We answered all requests for application blanks with a form letter explaining the need for delay. Nevertheless, we have continued to receive a few applications every week from people aware of the need to use a form containing the "ethics" statements but unaware of this year's Council action.

Here, then, are the Membership Committee's decisions. Any applicant who has completed, or started, his application on the forms in use this past year, prior to the publication date of this December *American Psychologist*, will not have to use the new form nor pay the \$2.00 application fee. Any applicant who has been specifically told by us of the new procedures, or whose application is received after the publication date of this issue of the *American Psychologist* on a form other than the new one incorporating this year's Council action, will have to re-submit his application on the

new form and pay the application fee. Persons whose applications have been rejected this year, or previously, will have to use the new forms if they wish to re-apply, but they will not need to pay the \$2.00 fee.

We plan to be as charitable as possible during this transition period, and we shall need the help of all the members. Supplies of the new forms have been mailed widely, but this is a reminder that any form that is given by an applicant to members for endorsement, rather than evaluation will almost always be an incorrect form. There will be a few applicants in the process of completing their applications on the old form in use this past year, but the evaluation blanks used under our new procedure will come to members only from this office.

All of this sounds complicated, and it is complicated. In a short while, however, the new procedures will be stabilized and much of the confusion of the recent past will be eliminated.

The next deadline for completing applications is August 1, 1953, with membership for those elected becoming effective January 1, 1954.

JANE D. HILDRETH

Report on the Employment Bulletin

Last spring, after exploring a number of possible placement procedures and after seeking the advice of the Board of Directors, the Central Office began publication of the monthly Employment Bulletin. This procedure replaced the former system of referring credentials of candidates to employers.

In the first six issues, 298 individual vacancies, 49 descriptions of large-scale programs, and 296 situation-wanted notices have been listed.

TABLE 1
Type of vacancies, requirements, and mean salaries

Field	Male			Female			Either Sex			Total
	PhD	MA	Either Degree	PhD	MA	Either Degree	PhD	MA	Either Degree	
Clinical	9 (\$5,642)	5 (\$4,837)	—	1 (\$4,800)	4 (\$4,600)	—	25 (\$5,470)	19 (\$3,831)	5 (\$4,395)	68
Academic	18 (\$4,616)	1	3 (\$3,666)	2 (\$3,700)	—	—	30 (\$4,431)	7 (\$3,233)	1 (\$4,500)	62
Research*	10 (\$7,058)	1 (\$4,850)	4 (\$4,600)	—	1	—	8 (\$5,922)	1 (\$4,000)	2 (\$5,000)	27
Industrial	2 (\$6,000)	7 (\$3,800)	4 (\$7,233)	—	1	—	—	2 (\$3,650)	—	16
Other	3 (\$7,100)	—	—	—	1	—	1	6 (\$4,383)	2 (\$7,100)	13
Total	42	14	11	3	7	—	64	35	10	186

* Mostly government and/or military research.

TABLE 2

Situations-wanted: Specialization of job-seekers

Field	Male		Female		Total
	PhD	MA	PhD	MA	
Clinical	28	13	11	12	64
Experimental	19	2	1	2	24
Educational	9	6	—	1	16
Counseling and Guidance	9	2	1	3	15
General	8	2	2	—	12
Child and Adolescent	3	2	2	1	8
Social	5	2	1	—	8
Industrial	4	3	—	—	7
Measurement	4	—	1	1	6
Vocational	2	2	—	—	4
Physiological	2	1	—	—	3
Other	1	1	—	—	2
Total	94	36	19	20	169

Each month 136 heads of graduate departments are sent two copies of the bulletin and copies are sent to 57 agencies employing large numbers of psychologists. Individual members of APA subscribe at the rate of one dollar for six issues. The list of subscribers has grown from 217 in May to 696 in October. The total number of bulletins mailed or distributed through the Placement Office is now about 1,200 a month.

Table 1 shows the fields of employment, mean salaries, and sex and degree specifications of 186

different jobs carried in the first six issues. (In cases where vacancies were run two or more times, they were tallied only once. Also the table does not include data from the descriptions of programs since these carried unspecified numbers of positions at various levels.)

Slightly more than one-third of the vacancies specified males only, and more than half of the vacancies required the doctorate. Salaries for academic vacancies are consistently lower than in other areas but in most cases these salaries are for nine or ten months employment.

Table 2 presents the fields of first specialization, sex, and degree status of 169 people listing situation-wanted notices. The fields of specialization are arranged in order of frequency. It will be seen that clinical psychologists appear three times more frequently than those with any other specialty. The table also emphasizes the current shortage of physiological psychologists.

There is some delay in obtaining feedback concerning the usefulness of the bulletin in bringing people and jobs together. However we already know of 32 placements resulting from the first four issues. This figure does not include placements resulting from the program descriptions, since information about these program vacancies comes from many sources besides the bulletin.

GEORGE W. ALBEE

Psychological Notes and News

Mary W. Daingerfield died last summer at the age of thirty-five. She had been on the staff of the U. S. Public Health Service, Lexington, Kentucky for approximately nine years.

Arnold W. Shilanse, senior psychologist of the Wernersville State Hospital, Wernersville, Pennsylvania, died at the Walter Reed Hospital on October 21, 1952 at the age of twenty-eight. He was also consultant to the Family Service and Jewish Community Center in Reading, Pennsylvania.

Walter R. Miles was awarded an honorary doctor of science degree by Earlham College, Richmond, Indiana on October 25, 1952. Dr. Miles received his bachelor's degree from Earlham College in 1908.

Samuel P. Hayes, Jr., who has spent the past year in Djakarta as Chief of the ECA-MSA Special Technical and Economic Mission to Indonesia, has returned to Washington, D. C. to become assistant director of the Mutual Security Agency, in charge of Far East programs.

Raymond A. Katzell has accepted the position of principal investigator with Richardson, Bellows, Henry & Company, Inc., of New York City. He has been a director of the corporation since 1946, and was recently elected to the Executive Committee of the Board. To accept this position, he has resigned from Syracuse University, where he was director of the Psychological Services Center.

James Drasgow has been appointed vocational counselor and instructor in psychology at the University of Buffalo. He has also received a research grant from the university for a factor analysis of the new Visio-verbal Concept Formation Test for Schizophrenia.

Robert B. Sleight is president of the newly organized Applied Psychology Corporation in Washington, D. C. He was formerly with the psychological laboratory of the Institute for Cooperative Research, The Johns Hopkins University.

Roger Heyns has been appointed to the APA Committee on Legislative Matters.

Sibylle K. Escalona, formerly director of research at the Menninger Foundation, resigned last summer to join the staff of the Child Study Center, Yale University. Melvin Weiner and Douglas Jackson have joined the psychological staff of the Menninger Foundation as assistants to the new director of research, Gardner Murphy. Faye K. Weiss has also joined the staff as a research assistant. Previously unreported in the list of psychologists at the Menninger Foundation are Rudolph Ekstein, Otto Fleischmann, and Hellmuth Kaiser, all training analysts in the Topeka Psychoanalytic Institute.

Robert L. Maurer is now acting dean of the Liberal Arts Division of the California State Polytechnic College at San Luis Obispo, where he had formerly been assistant professor of psychology.

William C. F. Krueger is now acting chairman of the psychology department, Liberal Arts College, at Wayne University.

Samuel Morford, clinical psychologist with The Personnel Laboratory, New York City, has been appointed Director of Psychological Services (Canada) and takes over his new duties at the Laboratory's Toronto office on December 10.

Luther Craig Long has resigned his position as director of the Child Guidance Clinic of the Public Schools, Health Department, and Juvenile Court of Miami, Florida, in order to open a private office in New London, Connecticut. In addition to private practice in child guidance he will become the psychologist on the staff of Cove Hill Manor Psychiatric Hospital in New London.

Emil Fredericson has accepted an appointment as assistant professor of psychology in the department of psychiatry, Indiana University School of Medicine at Indianapolis. He was formerly a research associate in the division of behavior studies of the Jackson Memorial Laboratory.

John J. Conger, formerly on leave as staff psychologist, U. S. Naval Academy and Navy Medical Research Institute, has returned to the Indiana University Medical Center, where he is assistant professor of clinical psychology in the psychiatry

department, and chief clinical psychologist at the Veterans Administration Hospital.

Marc B. Baer, formerly of the Traverse City (Michigan) State Hospital, was appointed staff psychologist at the Austin (Texas) State Hospital, effective September 15, 1952.

First Lieutenant Richard E. McKenzie, USAF (MSC), formerly at the Lapeer State Home and Training School, Lapeer, Michigan, has been serving as chief clinical psychologist at the 3345th Medical Group Hospital, Chanute AFB, Illinois, for the past year. Assisting him are Second Lieutenants Robert H. Cortner, clinical psychologist, formerly with the St. Louis University Hospital and Wallace Schneider, clinical psychologist, formerly interning at Greystone Park State Hospital, New Jersey.

David S. Goodenough, formerly chief psychologist at Longcliff State Hospital, Logansport, Indiana, has recently joined the staff at the VA Hospital, Knoxville, Iowa.

Two changes in staff positions have been announced by the Laboratory of Psychological Studies, Stevens Institute of Technology: J. Myron Johnson, formerly a vocational consultant on the staff of the Laboratory of Psychological Studies of the Stevens Institute of Technology, has been promoted to the position of assistant director of the Laboratory. Joseph G. Phelan, an assistant director, has been appointed assistant professor of psychology at the Institute. He will also act as student counselor to the undergraduate body.

The Chicago Psychological Institute announces that T. G. Grygier of London, England, Rockefeller Fellow in Social Sciences, has accepted a temporary appointment as clinical associate; and John B. McAllister, previously of the Norman Beatty Memorial Hospital, has accepted an appointment as clinical associate. Theodore J. Dulin, has replaced David Brown as principal psychiatric consultant. Johanna Krout Tabin is now devoting full time to the Institute.

The Committee on Doctoral Education of the APA Education and Training Board would like to call attention to the fact that a description of the VA-supported program for the training of counseling psychologists appeared in the November issue of the *American Psychologist*. As this ar-

ticle pointed out, the training of counseling psychologists should be conceived of as a program that can function independently of a clinical training program. The exigency of time made it necessary for the initial contacts for participation in this program to be made with those universities which were already participating in the VA clinical program. However, any university which wishes to be evaluated with view to participation in the VA counseling program may obtain the necessary forms by writing to Dr. Bruce V. Moore, Executive Officer of the E&T Board, American Psychological Association, 1333 Sixteenth Street N.W., Washington 6, D. C. Until more formal criteria are developed, the article, "Recommended Standards for Training Counseling Psychologists at the Doctorate Level," in the June, 1952 *American Psychologist* will serve as a rough guide for evaluation.

Membership applications for the Division of Clinical and Abnormal Psychology must be filed not later than February 15, 1953 to be considered for the coming year. Application blanks should be sent to the office of the secretary-treasurer, Dr. Ann Magaret, 5728 S. Ellis Avenue, Chicago 37, Illinois.

A filmstrip with sound on the "Psychological Evaluation of the Blind" has just been completed under the direction of Salvatore G. DiMichael of the Office of Vocational Rehabilitation. He had the consultative assistance of Samuel P. Hayes of the Massachusetts School for the Blind and Mary K. Bauman of the Personnel Research Center in Philadelphia. The filmstrip includes seventy-four frames of original art in full color and may be shown with any standard 35-mm. projector. The sound narrative is prepared on a 12-inch and a 16-inch record at a 33 $\frac{1}{3}$ rpm speed. The 22-minute filmstrip may be used as a teaching device for graduate trainees or for practicing psychologists. It may also be used with undergraduate students to indicate the application of psychological techniques to the physically handicapped. The material may be purchased at \$15 from Creative Arts Studio, 1200 Eye Street N.W., Washington 5, D. C.

The new education psychology staff at the University of Chicago has organized itself with two objectives in mind: first, the development of a learning theory which can account for complex human learning and adjustment in a wide range of situations, and second, the development of a training program in the field of educational psychology

which will prepare persons with the requisite knowledge and skills to work productively in situations primarily concerned with teaching and learning.

The first objective is based on the realization that present learning theories are derived largely from research with animals removed from their natural environment and human subjects memorizing materials of secondary importance to them, and therefore are of limited value in throwing light on the many kinds of complex learnings and adjustments required of man in the modern world. The members of the educational psychology staff participating in the core program include specialists in learning theory, group dynamics, child psychoanalysis, social anthropology, social psychology, research methodology, and the evaluation of ability and educational progress. This group keenly feels the need to integrate the insights, theories, and methodologies of their various disciplines as they bear on the problems involved in the understanding and control of the learning process.

The second objective, the program for the PhD in educational psychology, is composed of a one-year series of integrated and interlocking courses which deal with the basic literature, problems, and research methods relevant to the field of educational psychology (the core program); a series of advanced courses and seminars either in the department or in the University at large, to be selected in terms of the student's needs and interests; various practica to provide the student with guided experiences in research and teaching; and individual and group research in conjunction with members of the staff. This program is designed to develop the student's mastery of the basic concepts and findings pertinent to the learning process, to the characteristics of planned learning situations, and of the major techniques of investigation necessary for fundamental and creative research into the problems of this field.

It is expected that the educational experiences provided by this program will enable the student to integrate the major contributions from related disciplines concerned with human behavior as they apply to the educative process, to apply and test such generalizations by various research techniques, and to formulate means by which such generalizations may be applied to classroom situations in terms of feasible and desirable educational objectives.

The education psychology staff wishes to attract a relatively small number of outstanding students to work in this program. It is hoped that such

students will have a broad background in general education and, if possible, some specialization in the related social sciences. The entire staff plans to work with this group in a semitutorial relationship throughout the first year of the program. It is expected that students will then work more closely with individual staff members, according to their mutual theoretical and research interests. The members of the educational psychology staff are: Bruno Bettelheim, Benjamin S. Bloom, Allison Davis, Jacob W. Getzels, Ernest A. Haggard, Robert J. Havighurst, and Herbert A. Thelen.

A number of fellowships and assistantships will be available to students accepted for this program. For further details and information, interested persons should contact Ernest A. Haggard, chairman of the educational psychology staff, Department of Education, the University of Chicago, Chicago 37, Illinois.

How to secure technical research reports published by government agencies. A number of technical information organizations collect, index, catalog, announce, and distribute technical reports, many of which pertain to the field of psychology. Access to this material differs for various categories of users:

Military personnel should turn to the Armed Services Technical Agency (ASTIA), which was established in 1951 by the Secretary of Defense to serve the Armed Services and their contractors. ASTIA offers the following services:

1. Supplies documents on request on a loan or retention basis.
2. Supplies demand bibliographies.
3. Provides up-to-date announcement of documents available in any of several specified fields. The present announcement system by means of index cards (ATI) supplied by the ASTIA Document Service Center in Dayton, Ohio, and the Technical Information Pilot (TIP) supplied by the Technical Information Division of the Library of Congress, will shortly be replaced by a Title Announcement Bulletin.

Requests for any of these services should be addressed to the ASTIA Document Service Center, Knott Building, Dayton 2, Ohio.

Local reference service is offered by the Document Service Center, the ASTIA Western Regional Office, 5504 Hollywood Boulevard, Hollywood 28, California, and the Technical Information Division in the Library of Congress, Washington, D. C.

Contractors of the Armed Services may also avail themselves of the services of ASTIA. Since much of the material handled by ASTIA is classified, certain security measures have to be observed. To receive classified material, a contractor must be cleared for the necessary security level. Furthermore, a contractor may only receive material pertaining to those fields in which he has an established "need-to-know" defined by the scope of his contracts. To become an ASTIA user a contractor must complete a form called the "Field of Interest Register," which must be approved by a project officer of the sponsoring Military Service. These forms, together with instructions, may be obtained from the Document Service Center in Dayton.

Non-contractors should contact the Office of Technical Services (OTS) of the Department of Commerce, Washington 25, D. C., which was established by the 81st Congress to serve industry at large and the general public. OTS has a sizable collection of technical reports, and also serves as an outlet for unclassified material in the ASTIA collection.

OTS publishes a monthly *Bibliography of Technical Reports* (subscription \$5.00 per year), a *Technical Report Newsletter* (50 cents a year—free to Bibliography subscribers), and OTS press releases (about ten are issued each month—there is no charge to be put on the mailing list). Reports announced in these publications will be reproduced at prices varying with the reproduction method.

A book discussing the social, political, economic, legal, and procedural aspects of occupational licensing legislation has been published by the Council of State Governments. Psychologists interested in understanding and/or promulgating licensure or certification for psychologists may find the book useful. It can be obtained from the Council of State Governments, 1313 East Sixtieth Street, Chicago 37, Illinois. The price is \$3.00.

The 1953 Industrial Relations Research Award, a \$500 U. S. Government bond, will be presented by the Society for the Psychological Study of Social Issues to the individual whose research is judged most meritorious as a scientific contribution to the understanding of labor-management relations. The purpose of the award is to stimulate the development of new research approaches to the understanding of the social psychol-

ogy of industrial relations and to the improvement of the relationships between labor and management. This award has been made possible by a gift to the Society by the Harwood Manufacturing Corporation, through the offices of Dr. Alfred J. Marrow, President of the Harwood Corporation, and a member of SPSSI. Presentation of the year's award will be made at the annual meeting of the American Psychological Association in September, 1953. Any research study completed during 1952 or 1953 will be eligible for consideration. Manuscripts reporting completed research, whether or not published, should be submitted as far in advance of the closing date, May 1, 1953, as is feasible. A committee of judges is being appointed by the executive council of SPSSI. Their names and further information about the conditions for making the award will be published later. Inquiries concerning the award should be addressed to Dr. S. Stansfeld Sargent, Secretary, SPSSI, Department of Psychology, Barnard College, Columbia University, New York 27, N. Y.

The American Association of Marriage Counselors announces a limited number of fellowships in marriage counseling available to qualified professional persons. Requirements include a graduate degree at least at the master's level in social work, clinical psychology, medicine, or a closely related field; and at least three years' experience in working with people in the applicant's own specialized field, or a minimum of a year of supervised clinical experience in an established clinic. Applications for the year 1953-54 must be in by March 1, 1953. For further details, write to The Fellowship Committee, Evelyn M. Duvall, Chairman, American Association of Marriage Counselors, 270 Park Avenue, New York 17, N. Y.

Applications for the current **National Science Foundation Fellowship** awards may now be obtained from the Fellowship Office, National Research Council, Washington 25, D. C. Completed applications must be returned by January 5, 1953. The special examination for predoctoral students will be given at various places throughout the country on January 31, 1953. Applicants will be rated by Fellowship Boards established by the National Academy of Sciences. Final selection of Fellows will be made by the National Science Foundation. A detailed description of these Fellowships appeared in the September, 1952 *American Psychologist*, p. 557.

Convention Calendar

- American Psychological Association:** September 4-9, 1953; Michigan State College
For information write to:
 Dr. Fillmore H. Sanford
 1333 Sixteenth Street N. W.
 Washington 6, D. C.
- American Genetic Association:** January 8, 1953; Washington, D. C.
For information write to:
 Mrs. B. C. Lake
 1507 M Street N. W.
 Washington 5, D. C.
- New York State Psychological Association:** January 30-31, 1953; New York City
For information write to:
 Dr. Percival M. Symonds
 Teachers College
 Columbia University
 New York 27, N. Y.
- American Orthopsychiatric Association:** February 23-25, 1953; Cleveland, Ohio
For information write to:
 Miss Elizabeth Charleton
 American Orthopsychiatric Association
 303 Lexington Avenue, Room 210
 New York 16, N. Y.
- Child Study Association of America:** March 2-3, 1953; New York, New York
For information write to:
 Child Study Association of America
 132 East 74th Street
 New York 21, New York
- Optical Society of America:** March 19-31, 1953; New York, New York
For information write to:
 Professor Arthur C. Hardy
 Room 8-203
 Massachusetts Institute of Technology
 Cambridge 39, Massachusetts
- Inter-Society Color Council:** March 18, 1953; New York, New York
For information write to:
 Mr. Ralph M. Evans
 Inter-Society Color Council
 Color Control Division, Bldg. #65
 Eastman Kodak Company
 Rochester 4, New York
- American Personnel and Guidance Association:** March 29-April 2, 1953; Chicago, Illinois
For information write to:
 Executive Secretary
 American Personnel and Guidance Association
 1534 "O" Street N. W.
 Washington 5, D. C.
- Southern Society for Philosophy and Psychology:** April 3-4, 1953; Austin, Texas
For information write to:
 Dr. Oliver L. Lacey
 Department of Psychology
 University of Alabama
 University, Alabama
- National Association of Student Personnel Administrators:** April 6-9, 1953; East Lansing, Michigan
For information write to:
 Dean Tom King
 Michigan State College
 East Lansing, Michigan
- International Council for Exceptional Children:** April 8-11, 1953; Boston, Massachusetts
For information write to:
 Harley Z. Wooden, Secretary
 1201 Sixteenth Street N. W.
 Washington 6, D. C.
- Illinois Psychological Association:** April 11, 1953; Chicago, Illinois
For information write to:
 Professor George S. Speer
 Institute for Psychological Services
 3329 South Federal Street
 Chicago 16, Illinois
- Eastern Psychological Association:** April 24-25, 1953; Boston, Massachusetts
For information write to:
 Dr. G. Gorham Lane
 Department of Psychology
 University of Delaware
 Newark, Delaware
- Midwestern Psychological Association:** May 1-2, 1953; Chicago, Illinois
For information write to:
 Dr. Lee J. Cronbach
 Bureau of Research and Service
 University of Illinois
 1007½ South Wright Street
 Champaign, Illinois
- American Psychosomatic Society:** May 2-3, 1953; Atlantic City, New Jersey
For information write to:
 Miss Joan K. Erpf
 American Psychosomatic Society
 551 Madison Avenue
 New York 22, New York
- American Psychiatric Association:** May 4-9, 1953; Los Angeles, California
For information write to:
 Dr. Cullen Ward Irish
 1930 Wiltshire Boulevard
 Los Angeles 5, California
- Acoustical Society of America:** May 7-9, 1953; Philadelphia, Pennsylvania
For information write to:
 Dr. Harry F. Olson
 RCA Laboratories
 Princeton, New Jersey
- Pennsylvania Psychological Association:** May 9, 1953; Harrisburg, Pennsylvania
For information write to:
 Dr. William U. Synder
 Department of Psychology
 Pennsylvania State College
 State College, Pennsylvania
- American Association on Mental Deficiency:** May 12-16, 1953; Los Angeles, California
For information write to:
 Dr. Neil A. Dayton
 P. O. Box 96
 Willimantic, Connecticut
- Western Psychological Association:** June 18-20, 1953; Seattle, Washington
For information write to:
 Dr. Richard Kilby
 Department of Psychology
 San Jose State College
 San Jose, California
- Association Internationale de Psychotechnique:** July 27-August 1, 1953; Paris
For information write to:
 Pr. R. Bonnardel
 41, rue Gay-Lussac
 Paris 5°, France

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AMERICAN PSYCHOLOGICAL ASSOCIATION

1333 Sixteenth Street N.W.

Washington 6, D. C.

The American Psychological Association, founded in 1892 and incorporated in 1925, is the major psychological organization in the United States. With approximately 11,000 members, it includes most of the qualified psychologists in the country. The purpose of the APA is to advance psychology as a science, as a profession, and as a means of promoting human welfare. It attempts to further these objectives by holding annual meetings, publishing psychological journals, and working toward improved standards for psychological training and service. It also publishes a monthly Employment Bulletin containing notices of vacancies and situations wanted.

In order to give recognition to the specialized interests of different psychologists, the APA includes seventeen Divisions. Any person, after becoming a member of the APA may apply for membership in as many Divisions as he wishes. The Divisions are:

- Division of General Psychology
- Division on the Teaching of Psychology
- Division of Experimental Psychology
- Division on Evaluation and Measurement
- Division on Childhood and Adolescence
- Division of Personality and Social Psychology
- The Society for the Psychological Study of Social Issues—a Division of the American Psychological Association
- Division on Esthetics
- Division of Clinical and Abnormal Psychology
- Division of Consulting Psychology
- Division of Industrial and Business Psychology
- Division of Educational Psychology
- Division of School Psychologists
- Division of Counseling and Guidance
- Division of Psychologists in Public Service
- Division of Military Psychology
- Division on Maturity and Old Age

Each division has its own officers. Each meets annually at the time and place of the APA meeting. Each has its own membership requirements, which in some cases are higher or more specialized than the requirements for election to the APA.

The annual meetings of the APA are held in September. An attempt is made to choose meeting sites in such a way that attendance will be convenient for members and their guests in different sections of the country at different times. Thus, the 1953 meeting will be held from September 4 through September 9 at Michigan State College, and the 1954 meeting in New York City. These meetings provide the members with an opportunity to present or hear reports of psychological research and lectures on topics of psychological interest, and to participate in formal and informal discussion groups. The research reports, lectures, and discussion groups cover varied topics of current interest within the field of psychology.

The chief governing body of the APA is the Council of Representatives. It includes representatives from each of the Divisions. A Board of Directors, composed of the six officers of the APA (President, Past President, President-elect, Recording Secretary, Executive Secretary, and Treasurer) and six Council members elected by the Council, is the administrative agent of the Council and exercises general supervision over the affairs of the Association.

The APA maintains an office in Washington which acts as a coordinating center for all APA activities. Journal subscriptions, membership applications, personnel placement requests, and general APA business procedures are handled in this office.

MEMBERSHIP RULES IN THE AMERICAN PSYCHOLOGICAL ASSOCIATION

There are three classes of membership in the American Psychological Association: Associate, Fellow, and Life Member.

Associates

The largest class of membership is *Associate*. In order to qualify as an Associate an applicant must meet one of three sets of requirements:

1. He must have a doctor's degree based in part upon a psychological dissertation and conferred by a graduate school of recognized standing; *or*
2. He must have completed two years of graduate work in psychology at a recognized graduate school and be devoting full time to work or graduate study that is primarily psychological in character; *or*
3. He must have completed one year of graduate study plus one year of professional work in psychology and be devoting full time to work or graduate study that is primarily psychological in character.

Distinguished persons in related sciences, education, or other fields outside of psychology sometimes apply for membership in the Association because of their interest in allied research problems. When the Council of Representatives considers it in the interests of the Association to elect such distinguished persons, the requirements stated above may be waived.

Annual dues for Associates are \$17.50, except that for his first five years of membership, a member pays \$12.50 a year.

Applicants must have their applications complete by August 1. New Associates are elected in the fall and their membership is dated as of the next year. Journals due Associates begin with the January issues; they receive the *American Psychologist*, the *Psychological Abstracts*, the *Psychological Bulletin*, and the *Directory*.

Fellows

Properly qualified Associate members may, upon nomination by one of the Divisions and election by the Council of Representatives, become *Fellows* of the American Psychological Association. Fellows must previously have been Associates. They must have a doctor's degree and at least five years of acceptable professional experience beyond that degree. They must be primarily engaged in the advancement of psychology as a science and a profession.

Annual dues for Fellows are \$17.50, except that for his first five years of membership, a member pays \$12.50 a year. Fellows receive the same journals as Associates.

In the American Psychological Association, no one is made a Fellow except at his own request.

Life Members

Life Membership is open to members who have reached the age of 65 and who have been members for twenty years. They are exempt from dues, and receive the *American Psychologist* and the *Directory*.

